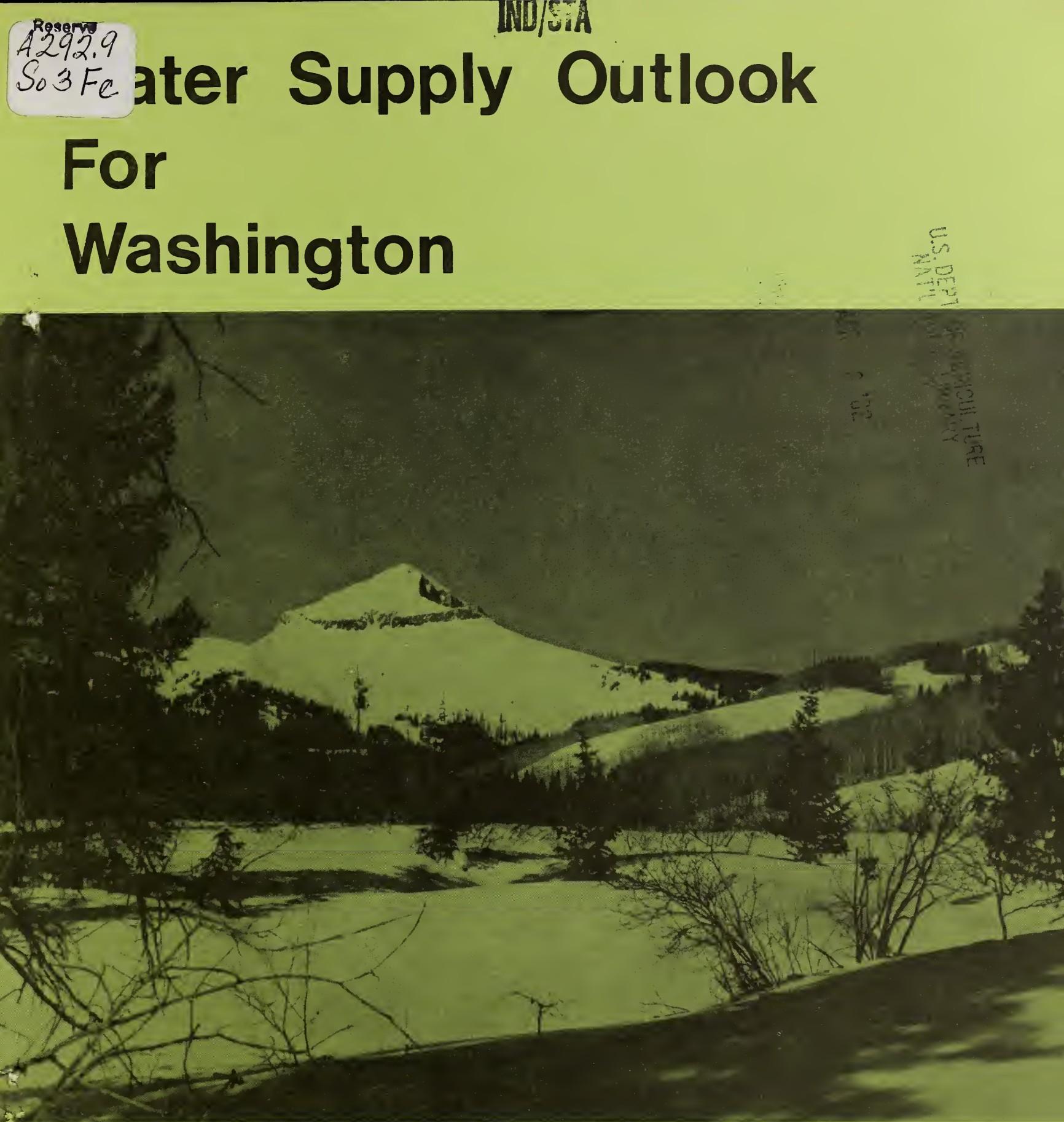


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Water Supply Outlook For Washington

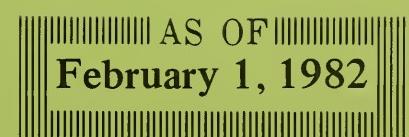


SOIL CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE

Cooperating with

DEPARTMENT OF ECOLOGY STATE OF WASHINGTON

AS OF
February 1, 1982



TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Cover: Lone Cone, near Norwood, Colorado, blanketed by its winter mantle of snow.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U. S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.



WATER SUPPLY OUTLOOK FOR WASHINGTON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

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SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

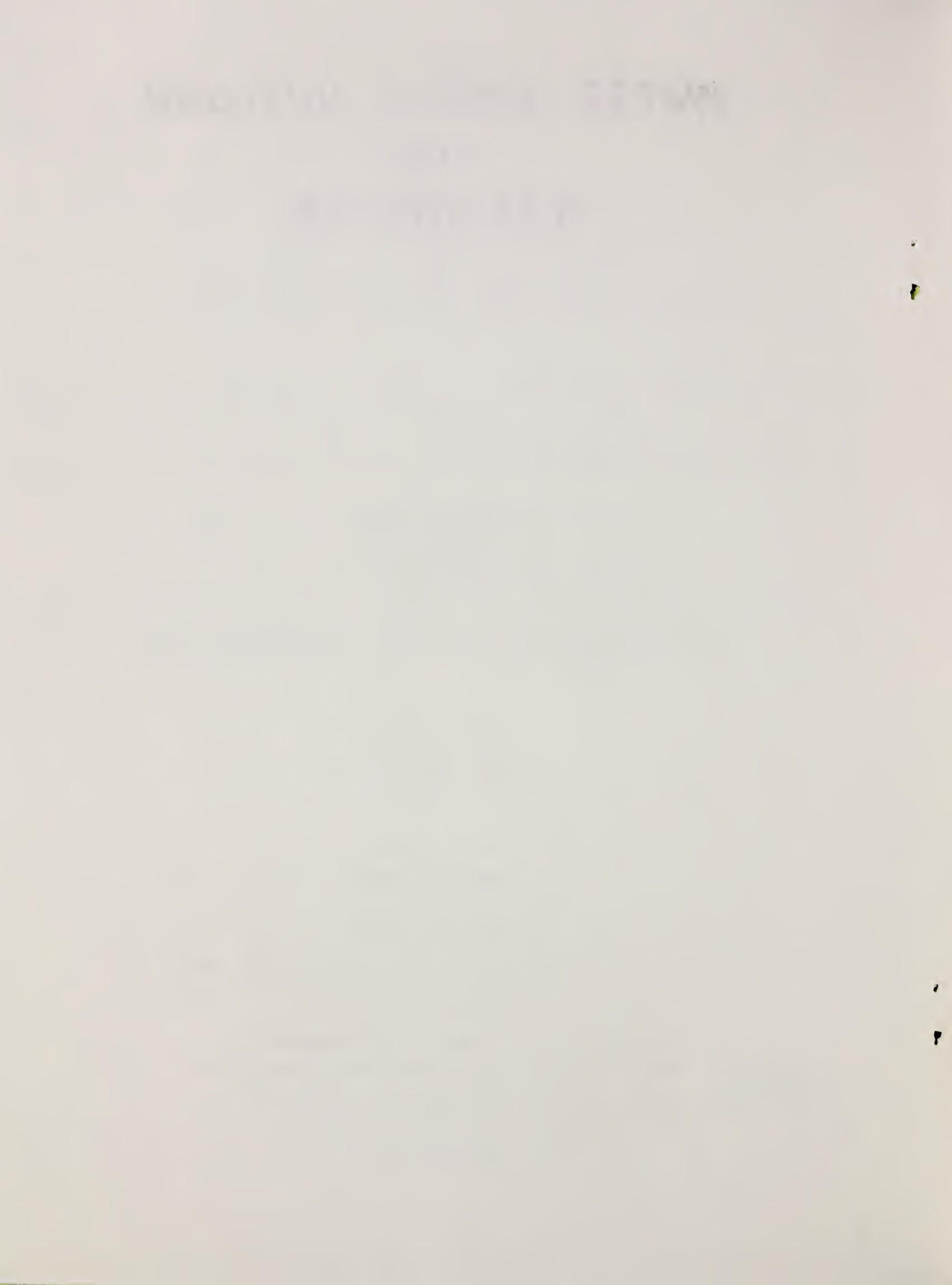
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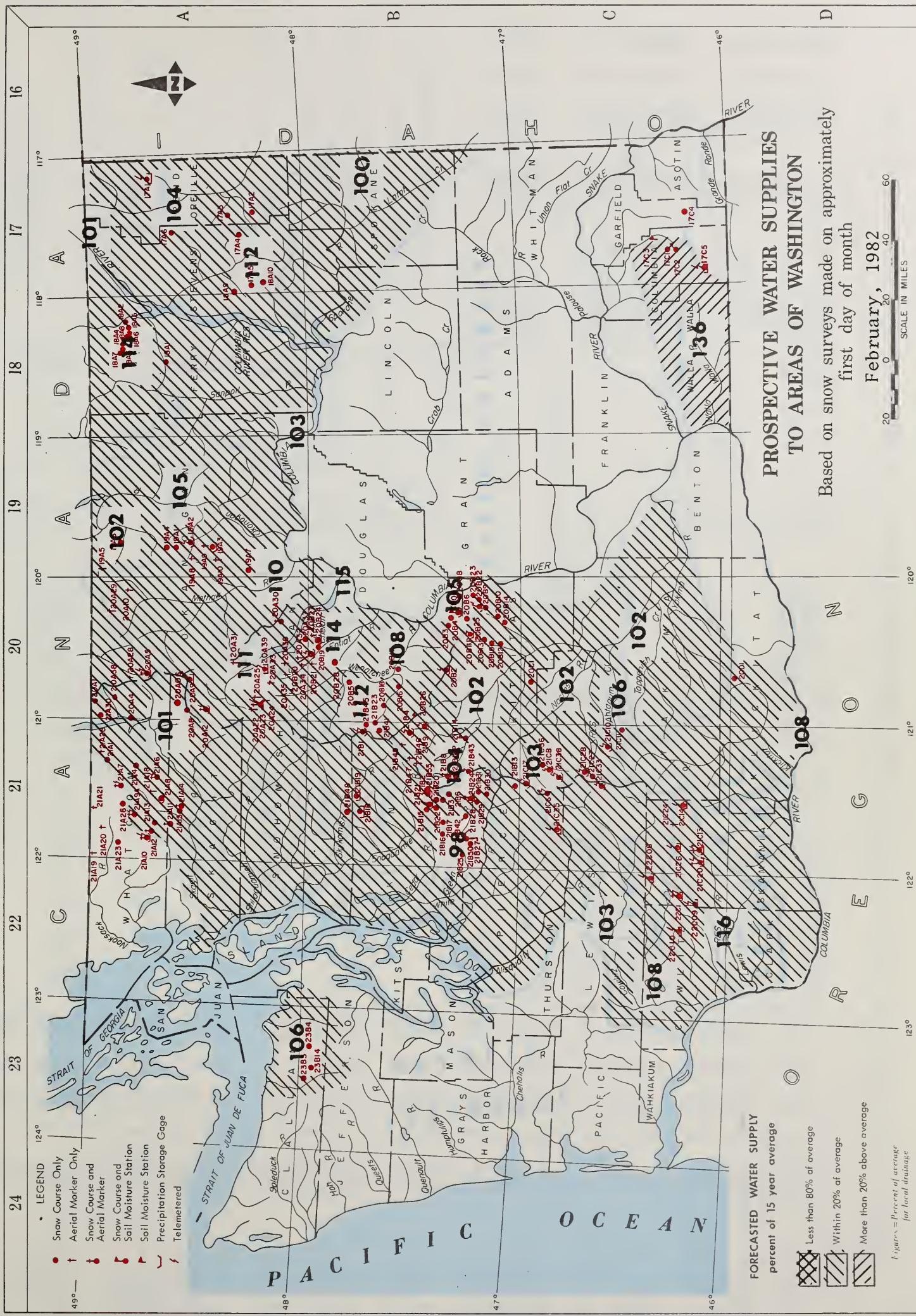
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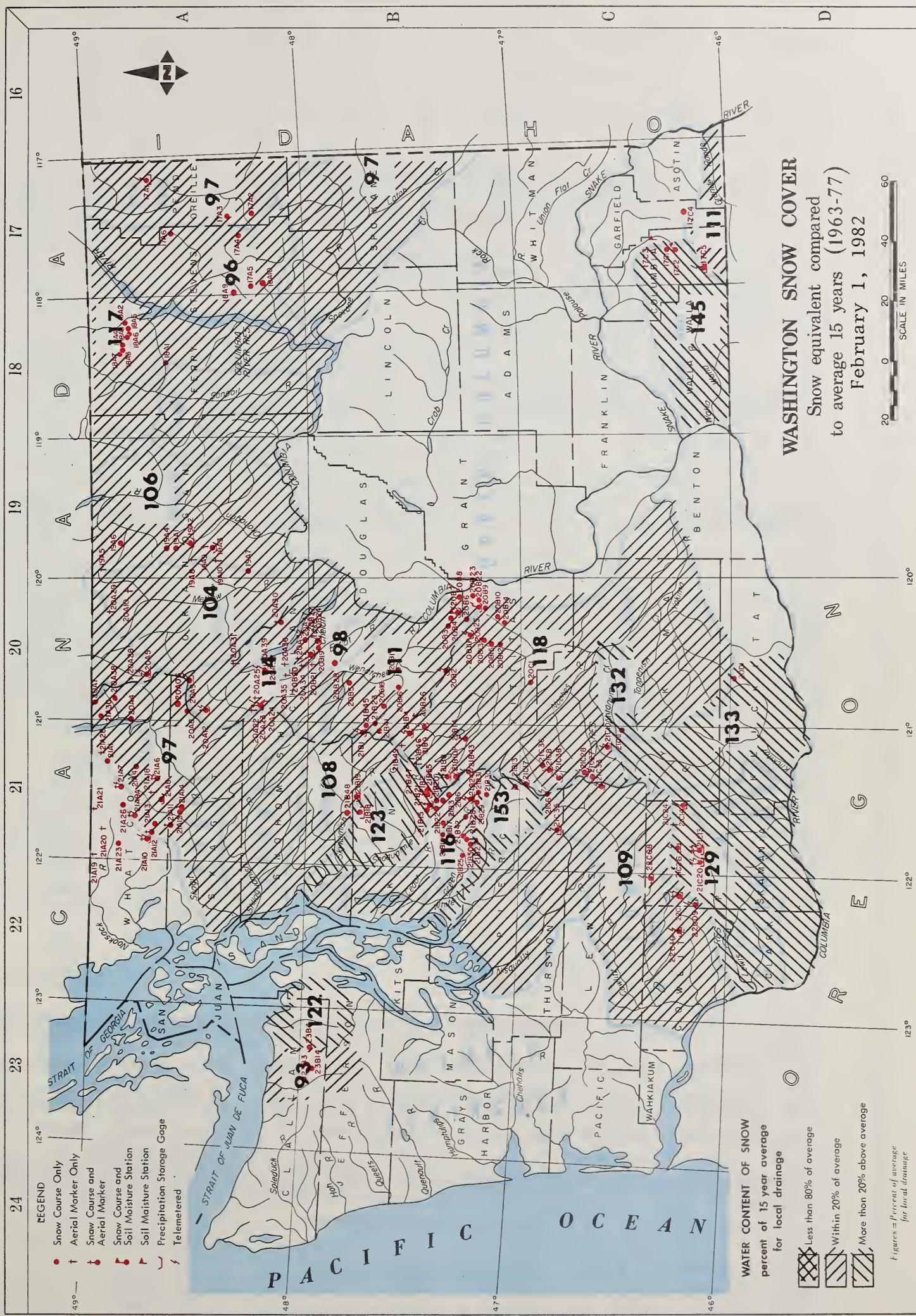
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INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES



INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.	NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.						
UPPER COLUMBIA DRAINAGE																							
Pend Oreille River						Colockum Creek						Lewis River											
Boyer Mountain	1742	7	31N	43E	5250	Colockum Creek Upper	20B22	11	20N	20E	5300	June Lake	22C09SP	26	8N	5E	3200						
Bunchgrass Meadow	17A1SP	24	37N	44E	5000	Colockum Creek Lower	20B23	1	20N	20E	4300	Lone Pine Shelter	21C26SP	8	9N	7E	3800						
Winchester Creek	17A3	30	33N	43E	2970	Squilchuck Creek						Plains of Abrahom	22C1SP	35	9N	5E	4400						
Kettle River						Beehive Springs	20B3	12	21N	19E		Spencer Meadow	21C20SP	16	8N	7E	3400						
Boulder Road						Scout-A-Vista	20B4	18	21N	20E	4400	Surprise Lakes	21C13SP	14	7N	8E	4250						
Burnt Creek	18A2	36	39N	36E	1450	Steptilt Creek						Freezeout Creek Trail	20A1										
Cabin Creek	18A3	5	38N	35E	4070	Jump-Off	20B8	34	21N	20E	4450	Granite Creek	20A38										
Goat Creek	18A4	26	39N	36E	3170	Steptilt Slide	20B6	30	21N	20E	5000	Meadows Cabins	20A06										
Snow Caps Creek	18A5	3	38N	36E	2150	Upper Wheeler	20B7SP	30	21N	20E	5000	Homestead	20A8										
Snow Caps Trail	18A6	5	38N	36E	2720						Martin Springs (Helmers SM)	21C6	15	16N	10E	5300							
Summit G. S.	18A7	20	39N	35E	4600	Ahanum R. S.	21C11	24	12N	14E	3100	Pigtail Peak	21C33SP	11	13N	11E	5900						
Cowlitz River						Bumping Lake	21B9SP	35	23N	14E	3200	Potato Hill	21C14SP	36	10N	4E	4500						
Baird	17A6	19	36N	42E	3215	Bumping Lake New	21C8P	23	16N	12E	3450	Sheep Canyon	22C10SP	12	8N	6E	4050						
Carlton	18A9	34	32N	38E	2885	Bumping Lake Ridge	21C36SP	13	16N	12E	3400	Strawberry	22C08SP	9	10N	6E	3280						
Chewelah Mountain	17A4	11	31N	41E	4925	Colockum Pass	20B9	25	20N	20E	5370	Dock Butte	21A11A	8	36N	8E	3800						
Togo	17A5	26	31N	38E	4990	Cooke Creek	20B10	17	19N	20E	4123	Easy Pass	21A7A	19	39N	11E	5200						
Sherman Creek Pass	18A10	6	29N	38E	3370	Fish Lake	21B4SP	28	24N	14E	3371	Jasper Pass	21A6A	17	38N	11E	5400						
Clark	19A8a	2	36N	36E	5350	Green Lake	21C10SP	3	12N	13E	6000	Mount Blum	21A9A	23	38N	8E	3600						
Muckamuck	19A9a	20	36N	36E	7000	Grouse Camp	20B11SP	29	21N	19E	5385	Rocky Creek	21A18P	27	38N	10E	5800						
Mutton Creek No. 1	19A1	30	37N	24E	6750	High Creek	20B12	34	20N	19E	2930	Schreibers Meadow	21A20P	18	37N	8E	2100						
Mutton Creek No. 2	19A4	19	37N	24E	5700	Joe Lake	21B46a	22	23N	12E	4624	S. F. Thunder Lake	21A10AP	20	36N	9E	3400						
Pasayten	19A3P	32	40N	18E	6000	Lake Cle Elum	21B14M	15	20N	14E	2200	Sulphur Creek	21A14A	20	37N	8E	2200						
Rusty Creek	19A2SP	33	37N	24E	4300	Lemah Creek	20C1	24	23N	13E	3327	Three Mile Creek	21A13	22	37N	8E	1600						
Salmon Meadows	19A10a	15	40N	23E	4000	Manastash	21C17SP	6	16N	16E	3935	Watson Lakes	21A8P	25	37N	9E	4500						
Starvation Mtn.	19A6	30	39N	25E	4500	Nanum	20B13	4	20N	19E	3875	PUGET SOUND DRAINAGE											
Touts Coulee						Tunnel Avenue	20B14	20	19N	20E	3360	OLYMPIC PENINSULA											
Billy Goat Pass	20A10a	10	38N	20E	6400	Van Eps Pass	20B26a	16	23N	11E	5252	Dungeness River											
Harts Pass	20A29a	8	39N	18E	7000	Wapiti Lake	20B15	22	23N	13E	3350	Bald Mountain	21A19a	7	40N	7E	4400						
Horseshoe Basin	19A5a	7	37N	18E	6500	White Pass (East Side)	21C28SP	2	13N	11E	4500	Canyon Glacier	21A20a	20	40N	8E	5100						
Loup Loup	19A7	36	34N	23E	4650						Panorama New	21A23	9-10	38N	7E	3700							
LOWER COLUMBIA DRAINAGE																							
Chelan Lake Basin						Cloudy Pass	20A22a	12	31N	15E	6500	Paradise Park (New)	21B13SP	30	18N	11E	6000						
Cloudy Flat	20A22a	31N	31E	31N	16E	Greenwood Flat	20A25a	3	31N	16E	3540	White River	21B13SP	30	18N	11E	5500						
Little Meadows	20A24a	8	31N	16E	5275	Lyons Flat	20A23SP	18	31N	16E	5900	Green River	21B24P	18	20N	11E	1800						
Park Creek Ridge	20A12SP	18	31N	16E	4600	Rainy Pass	20A9SP	21	35N	17E	4780	Green River	21B25	27	21N	8E	1200						
Rainy Pass	20A9SP	21	35N	17E	32	Safety Harbor	20A30a	32	31N	20E	6300	Green River	21B25P	21	21N	9E	3200						
War Creek Pass	20A31a	34	33N	18E	6500	Starvation Mtn.	20A31a	30	31N	18E	5600	Grass Mountain No. 3	21B27	14	20N	8E	2900						
Mirror Lake	20A39	30	31N	18E	4650						Lester Creek	21B28	36	20N	10E	3100							
LOWER COLUMBIA DRAINAGE																							
Entiat River	20B28a	19	28N	18E	5425	Spokane Springs	17C4	9	8N	40E	5700	Lyons Lake	21B29	36	20N	10E	4500						
Blue Creek G. S.	20B19	34	28N	19E	6500						Snowy Ridge	21B30	25	21N	11E	3800							
Brief	20A33a	28	31N	17E	5450						Stumpede Pass	21B30P	18	19N	11E	4100							
Entiat Meadows	20A34a	2	29N	17E	3325						Twin Camp	21B30	18	19N	11E								
Entiat River Trail	20B27a	15	28N	19E	6510																		
Four Mile Ridge	20A33a	17	30N	19E	3340																		
Fox Camp	20B20	22	29N	18E	3340																		
Pope Ridge	20B24SP	22	29N	18E	6725																		
Pope Ridge Snow Pillow	20A32a	34	30N	18E	6200																		
Pugh Ridge	20A37	20	29N	19E	3910																		
Shady Pass	20A35a	21	30N	17E	4900																		
Snow Bushy	20B21a	10	28N	18E	15E																		
Tommy Creek																							
Wenatchee River																							
Berne-Mill Creek (New)	20B14SP	13	26N	14E	3170	Couse	17C3m	2	9N	40E	3370	Snoqualmie River	21B3	10	21N	10E	2390						
Berne-Mill Creek No. 2	20B21SP	35	22N	17E	3240	Homestead	17C1	11	9N	40E	4030	Alpine Meadow	21B22	30	22N	10E	3625						
Chiwaukum G. S.	20B16	4	26N	16E	4270	Martin Springs (Helmers SM)	17C2M	15	9N	40E	4400	Ollalie Meadow	21B2P	31	22N	9E	1900						
Lake Wenatchee	20B5	33	27N	17E	1810	Touchet No. 2	17C5SP	6	7N	40E	5530	South Fork Tolt	21B18P	26	26N	9E	8700						
Leavenworth R. S.	20B17	17E	24N	16E	1700																		
Meritts Pass	20B18	14	26N	16E	1127																		
Stevens Pass	20B19	12	26N	16E	2140																		
Trough #2	20B25	20N	20E	1300	Touchet River	20D1	21	6N	17E	4030	Klickitat River	21B19P	33	26N	10E	2900							

PRECIPITATION

WATER SUPPLY OUTLOOK

The outlook for water supply in the state of Washington can be considered near normal as of February 1, 1982. The snowpack is average or above and rainfall has been better than normal. The snowpack now ranges from a high of 45 percent above normal in the southeastern portion of the state to 7 percent below average on the Elwha River near Port Angeles. Above normal snowfall occurred over the northern portion of the state and tributary basins during January but near normal snow fell over the rest of the state.

The snowpack in the Upper Columbia portion of the watershed was 8 percent above normal and 312 percent greater than last year. Along the Lower Columbia portion of the basin, snow cover is 29 percent greater than average and 774 percent better than last year. In the Puget Sound drainage, February 1 snow cover was 19 percent above average and 677 percent better than last year. The extremes occurred on the Olympic Peninsula where the current snowpack is 8 percent greater than average but 2148 percent better than last year.

RESERVOIRS

The Yakima irrigation reservoirs have the least amount of water in storage of all major reservoirs in the state. With a capacity of 1,066,000 acre-feet, the current storage is only 407,800 acre-feet, or 38 percent. The average capacity is 656,400 acre-feet. Most of this deficit is in Lake Cle Elum. The storage in this reservoir is only 13 percent of capacity. Lake Cle Elum is the largest of the five Yakima reservoirs and is the easiest to fill. It is anticipated that all reservoirs will fill with the spring runoff. Most power reservoirs have above normal amounts of water in storage -- 34 percent above for Lake Roosevelt, and 9 percent above for Lake Chelan. Ross Reservoir has water in storage that is 7 percent below normal.

PRECIPITATION

As reported by the National Weather Service, January rainfall was above normal in all drainage divisions used for this report. The wettest areas were along the east slopes of the Cascades and in the Okanogan drainage, both with 123 percent of normal rainfall. The driest area was the Pend Oreille-Spokane drainage of eastern Washington and northern Idaho with a 101 percent of average rainfall. The November through January precipitation now ranges from a low of 96 percent of normal for the Pend Oreille-Spokane drainage to a high of 114 percent for the southeastern portion of the state. Fall rainfall varied from 12 percent below normal -- again on the Pend Oreille-Spokane -- to a high of 64 percent above for the Okanogan drainage division.

STREAMFLOW

River flows during January were generally below normal with a few exceptions. The Kettle had an outflow of 86 percent above normal and the Columbia at Birchbank, 7 percent above. The least amount of water came from western Montana where the Pend Oreille was only 46 percent of average. Forecasts of spring and summer runoff are generally for near normal outflows with the only subnormal amounts occurring in the Puget Sound drainages. The largest, percentagewise, is the forecast of Mill Creek at Walla Walla which is expected to flow 36 percent above normal during the April-September period. Numerical forecasts can be found following this narrative.

STREAMFLOW FORECASTS - FEBRUARY, 1982

The following summarized runoff forecasts are based principally on mountain snow-cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts. The forecasts are made as a product of the cooperative efforts of the Soil Conservation Service and the National Weather Service. Streamflow figures for 1981 are preliminary and subject to revision.

Basin, Stream and Station	Forecast Runoff 1982	Seasonal Streamflow in Thousands of Acre-Feet						
		% 15-Yr. Avg.	Fore- cast period	1981	1980	1979	15-Yr. Average 63-77	
<u>COLUMBIA BASIN</u>								
<u>COLUMBIA RIVER SYSTEM</u>								
Columbia River at Birchbank <u>1/</u>	45900 36700 26500	101 101 101	Apr-Sept Apr-July Apr-June	48531 38501 27002	40816 34085 27623	34484 27181 19661	45510 36358 26197	
Columbia River at Grand Coulee <u>1/</u>	69800 58500 45600	103 103 103	Apr-Sept Apr-July Apr-June	70303 58525 44235	61016 52320 43871	52769 44096 35138	68026 57050 44280	
Columbia River bl. Priest Rapids <u>1/</u>	77400 65400 50900	105 105 105	Apr-Sept Apr-July Apr-June	77308 64689 49348	66512 57767 48667	55298 46700 37453	73911 62444 48479	
Columbia River at The Dalles, OR <u>1/</u>	113000 96500 77600	109 109 109	Apr-Sept Apr-July Apr-June	96997 82171 65104	93170 79931 68316	76843 65758 55016	103477 88503 71219	
<u>PEND OREILLE RIVER SYSTEM</u>								
Pend Oreille River bl. Box Canyon	16300 14900 12800	104 104 104	Apr-Sept Apr-July Apr-June	13896 13179 11594	13271 12116 10776	11639 11095 10217	15643 14334 12277	
<u>KETTLE RIVER SYSTEM</u>								
Kettle River nr. Laurier	2100 1930 1750	114 110 110	Apr-Sept Apr-July Apr-June	2181 2039 1711	1835 1747 1603	1259 1216 1132	1845 1753 1587	
Colville River at Kettle Falls	150 140 130	112 114 113	Apr-Sept Apr-July Apr-June		116 105 97	63 58 55	134 123 115	

1/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. D. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.

Basin, Stream and Station	Forecast Runoff 1982	Seasonal Streamflow in Thousands of Acre-Feet					
		% 15-yr. Avg.	Fore- cast period	1981	1980	1970	15-Yr. Average 63-77
SPOKANE RIVER SYSTEM **							
Spokane River at Post Falls, ID	2900	100	Apr-Sept	2238	2214	2809	2910
	2760	101	Apr-July	2145	2046	2757	2733
	2650	102	Apr-June	1960	1904	2678	2600
OKANOGAN RIVER SYSTEM							
Similkameen River nr. Nighthawk	1550	102	Apr-Sept	1241	1479	872	1517
	1430	101	Apr-July	1118	1391	812	1417
	1270	107	Apr-June	930	1247	728	1192
Okanogan River nr. Tonasket	1800	105	Apr-Sept		1551	909	1718
	1660	106	Apr-July	1363	1423	825	1564
	1460	112	Apr-June	1090	1240	730	1304
METHOW RIVER SYSTEM							
Methow River nr. Pateros	1110	110	Apr-Sept		996	478	1011
	1050	112	Apr-July		934	432	937
	890	113	Apr-June		811	382	791
CHELAN RIVER SYSTEM							
Chelan River at Chelan	1430	115	Apr-Sept	917	1120	753	1238
	1250	116	Apr-July	812	1020	662	1080
	980	118	Apr-June	647	859	553	834
Stehokin River at Stehokin	980	111	Apr-Sept			566	883
	850	114	Apr-July			477	744
	650	117	Apr-June			387	557
Entiat River nr. Ardenvoir	275	114	Apr-Sept		216	134	241
	250	115	Apr-July		200	120	218
	200	115	Apr-June		172	104	174
WENATCHEE RIVER SYSTEM							
Wenatchee River at Plain	1450	112	Apr-Sept			893	1297
	1310	113	Apr-July			812	1156
	1000	111	Apr-June			704	903
Wenatchee River at Peshastin	1900	108	Apr-Sept	1249	1516	1165	1767
	1750	110	Apr-July	1148	1399	1074	1586
	1400	112	Apr-June	956	1208	938	1250
Steilacum Basin nr. Wenatchee	140*	101	May-Sept				138*
Icicle Creek nr. Leavenworth	390	106	Apr-Sept				371
	365	107	Apr-July				342
	300	108	Apr-June				279

* Thousands of Miners' Inches.

** Forecasts made by Jack A. Wilson, Soil Conservation Service, Boise, Idaho.

2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie Canals.

3/ Observed flow corrected for storage in Lake Chelan.

Basin, Stream and Station	Forecast Runoff 1982	Seasonal Streamflow in Thousands of Acre-Feet						15-yr. Average 63-77
		% 15-yr. Avg.	Fore cast period	1981	1980	1979		
YAKIMA RIVER SYSTEM								
Yakima River nr. martin <u>4/</u>	150 140 115	104 105 101	Apr-Sept Apr-July Apr-June	95 82 73	115 103 95	124 114 101	144 133 114	114
Yakima River at Cle Elum <u>5/</u>	990 900 780	102 102 104	Apr-Sept Apr-July Apr-June	700 643 563	792 716 646	714 683 599	975 882 750	
Yakima River nr. Parker <u>6/</u>	2200 1990 1760	102 102 104	Apr-Sept Apr-July Apr-June	1194 1059 961	1833 1733 1610	1388 1287 1179	2168 1954 1693	
Kachess River nr. Easton <u>7/</u>	130 125 105	103 105 102	Apr-Sept Apr-July Apr-June	81 72 66	111 105 91	101 95 88	126 119 103	
Cle Elum River nr. Roslyn <u>8/</u>	500 450 370	104 103 103	Apr-Sept Apr-July Apr-June	313 282 244	348 326 314	348 326 292	479 435 358	
Bumping River nr. Nile <u>9/</u>	150 140 110	103 106 104	Apr-Sept Apr-July Apr-June	78 70 63	129 120 111	99 92 82	146 132 106	
American River nr. Nile	130 120 100	102 103 105	Apr-Sept Apr-July Apr-June			81 74 66	127 116 95	
Tieton River at Tieton Dam <u>10/</u>	270 225 185	108 106 110	Apr-Sept Apr-July Apr-June	148 131 108	224 192 166	179 148 120	252 212 168	
Naches River nr. Naches <u>11/</u>	910 830 700	102 105 103	Apr-Sept Apr-July Apr-June	419 380 339	729 694 638	574 528 478	893 806 678	
Ahtanum Creek nr. Tampico <u>12/</u>	50 45 40	106 107 108	Apr-Sept Apr-July Apr-June				47 42 37	

4/ Observed flow corrected for storage in Lake Keechelus.

5/ Observed flow corrected for storage in Keechelus, Kachess, and Cle Elum Lakes and diversion by Kittitas Canal.

6/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping, and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation, and Sunnyside Canals.

7/ Observed flow corrected for storage in Lake Kachess.

8/ Observed flow corrected for storage in Lake Cle Elum.

9/ Observed flow corrected for storage in Bumping Lake.

10/ Observed flow corrected for storage in Rimrock Lake.

11/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals, and City of Yakima.

12/ Observed flow of North and South Forks (Combined).

Basin, Stream and Station	Forecast Runoff 1982	Seasonal Streamflow in Thousands of Acre-Feet					
		% 15-yr. Avg.	Fore- cast period	1981	1980	1979	15-yr. Average 63-77
<u>LOWER COLUMBIA RIVER SYSTEM</u>							
Mill Creek at Walla Walla	23.9	136	Apr-Sept			22.37	17.50
	23.7	137	Apr-July			22.25	17.33
	23.4	136	Apr-June			22.14	17.15
Lewis River at Ariel <u>13/</u>	1500	116	Apr-Sept	1096	1001	962	1298
	1300	115	Apr-July	971	883	830	1128
	1140	115	Apr-June	865	798	749	992
Cowlitz River b1. Mayfield Dam	2200	103	Apr-Sept		1626	1563	2126
	1960	106	Apr-July		1432	1367	1854
	1650	106	Apr-June		1275	1203	1553
Cowlitz River at Castle Rock <u>14/</u>	3000	108	Apr-Sept	2390	1976	2046	2766
	2600	108	Apr-July	2125	1852	1792	2401
	2170	107	Apr-June	1875	1649	1574	2029
<u>OLYMPIC PENINSULA</u>							
<u>DUNGENESS RIVER SYSTEM</u>							
Dungeness River nr. Sequim	170	106	Apr-Sept			110	160
	140	108	Apr-July			90	130
	105	109	Apr-June			71	96
<u>PUGET SOUND</u>							
<u>SKAGIT RIVER SYSTEM</u>							
Skagit River at Newhalem <u>15/</u>	2500	98	Feb-Aug			1785	2532
	2380	101	Apr-Sept			1648	2356
	2010	102	Apr-July			1359	1972
	1515	102	Apr-June			1102	1485
<u>GREEN RIVER SYSTEM</u>							
Green River b1. Howard Hanson Dam <u>16/</u>	310	98	Apr-Sept				316
	280	98	Apr-July				284
	255	100	Apr-June				256

13/ Observed flow corrected for storage in Lake Merwin, Yale, and Swift Reservoirs.

14/ Observed flow corrected for storage in Mayfield Reservoir.

15/ Observed flow corrected for storage in Diablo, Ross, and Gorge Reservoirs.

16/ Observed flow corrected for storage in Howard Hanson Dam.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content of the snow about February 1, 1982, as percent of the same date in 1981 and 1980 and average of record.

Tributary Basin	No. of Courses Average	1982 Snow Water Expressed as percent of		
		1981	1980	1963-77 Avg.
<u>UPPER COLUMBIA BASIN</u>				
Pend Oreille	11	259	119	97
Kettle	15	205	207	117
Colville	5	262	118	96
Spokane	6	1178	158	97
Okanogan	27	299	159	106
Methow	6	190	123	104
Cheelan	5	244	147	114
Entiat	11	195	119	98
Wenatchee	10	752	143	111
Yakima	24	612	162	118
Ahtanum	2	340	108	132
<u>LOWER COLUMBIA BASIN</u>				
Mill Creek	3	1217	173	145
Klickitat	1	843	179	133
Lewis	3	-	-	129
Cowlitz	2	562	154	109
<u>PUGET SOUND</u>				
White	2	377	184	153
Green	9	755	184	116
Snoqualmie	1	1340	258	123
Skykomish	2	818	148	108
Skagit	14	594	142	97
<u>OLYMPIC PENINSULA</u>				
Elwha	1	2170	258	93
Dungeness	1	2325	179	122

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR STREAM	RESERVOIR	USABLE 1/ CAPACITY	Measured (February)			
			1982	1981	1980	Normal*
<u>COLUMBIA</u>						
Spokane	Coeur d'Alene Lake	225.1	72.2	180.0	54.9	145.3
Columbia	Franklin D. Roosevelt Lake	5232.0	4961.6	4726.9	3063.5	3698.2
Columbia	Banks Lake	714.9	704.2	120.8	690.9	619.4
Okanogan	Conconully Reservoir	13.0	9.1	6.8	3.0	6.2
Okanogan	Conconully Lake	10.5	8.9	10.4	8.3	7.6
Chelan	Lake Chelan	676.1	319.9	481.3	255.7	294.2
<u>YAKIMA</u>						
Yakima	Keechelus Lake	157.8	82.1	113.8	67.4	97.6
Kachess	Kachess Lake	239.0	148.0	179.2	67.9	173.4
Cle Elum	Lake Cle Elum	436.9	57.6	220.9	361.7	259.7
Bumping	Bumping Lake	33.7	4.0	17.0	9.2	7.8
Tieton	Rimrock Lake	198.0	116.1	170.5	54.6	118.0
<u>PUGET SOUND</u>						
Skagit	Ross Reservoir	1404.1	942.9	1293.9	845.8	1012.6
Skagit	Diablo Reservoir	90.6	84.0	87.6	87.9	84.2
Skagit	Gorge Reservoir	9.8	7.9	7.9	7.1	7.9

1/ Based on Active Storage

* 15-yr. Average 1963-1977

PRECIPITATION 1/
Division Average Observations and Departures

Drainage Divisions	FALL			WINTER		
	Sept-Oct Observed	1981 2/ Departure		Nov. 1981 - Jan. 1982 Observed	2/ Departure	
Columbia in Canada	5.17	+0.15		10.34	+0.06	
Pend Oreille - Spokane	3.56	-0.48		11.65	-0.53	
Northeastern Washington	3.28	+0.80		6.61	-0.10	
Southeastern Washington	3.03	+0.52		8.06	+1.00	
East Slope Cascades	4.87	+0.12		21.20	+1.17	
North Central Washington	2.61	+1.02		5.01	+0.17	
Northwest Slope Cascades	13.88	+0.67		37.63	-0.30	
Southwest Slope Cascades	9.98	+1.30		29.04	+0.13	

- Northeastern Washington
 - Lower Spokane, Colville, Sanpoil, and Lower Kettle Drainages.
- Southeastern Washington
 - Touchet, Tucannon, and Palouse Drainages.
- East Slope Cascades
 - Yakima, Wenatchee and Chelan Drainages.
- North Central Washington
 - Methow and Okanogan Drainages.
- Northwest Slope Cascades
 - Puget Sound Drainages.
- Southwest Slope Cascades
 - Lower Columbia Drainages.

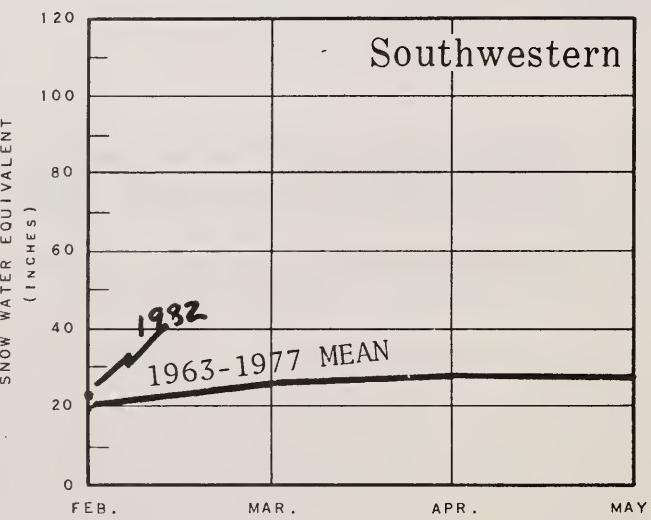
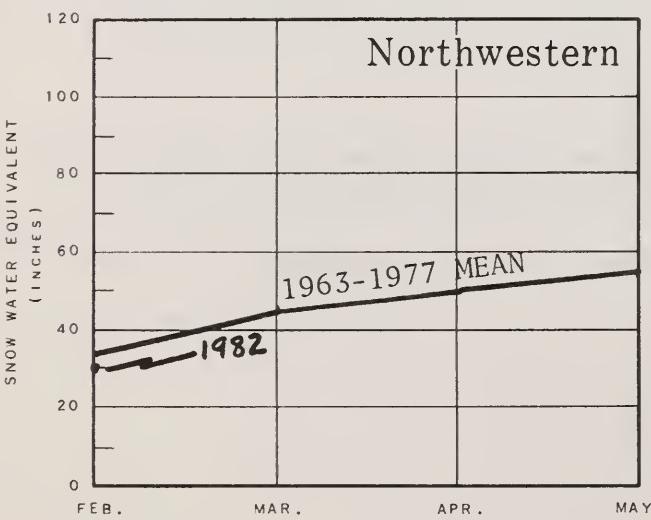
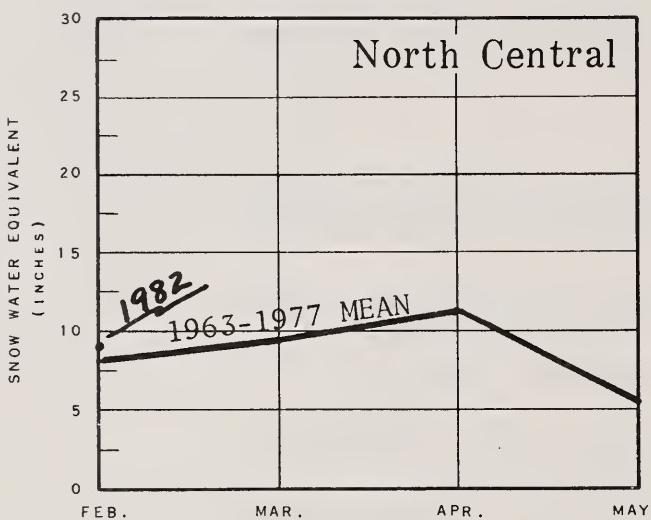
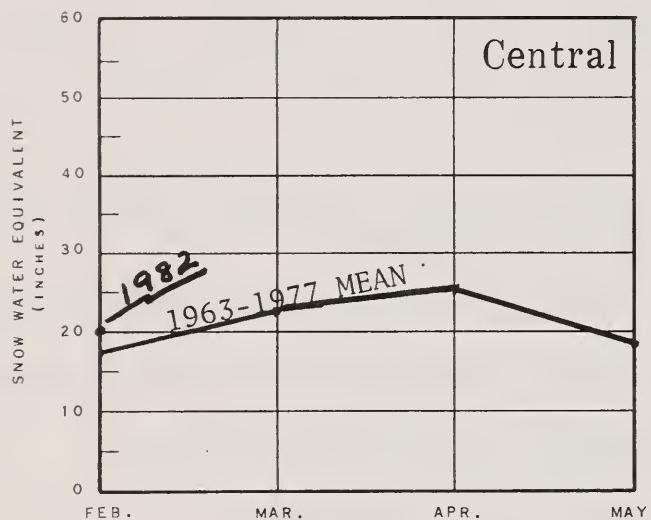
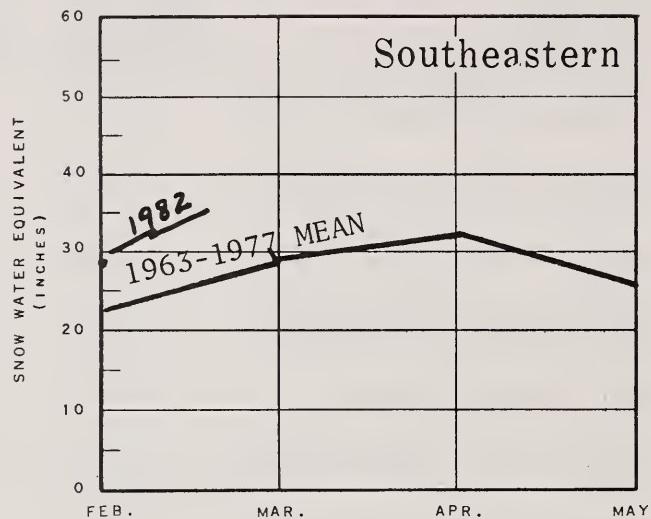
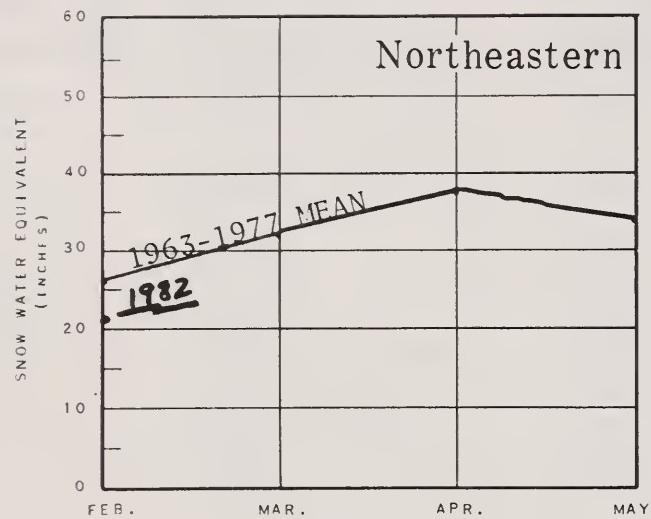
1/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service.

2/ - Departure from 15-year (1958-72) drainage division average.

WASHINGTON SNOW COVER

1982

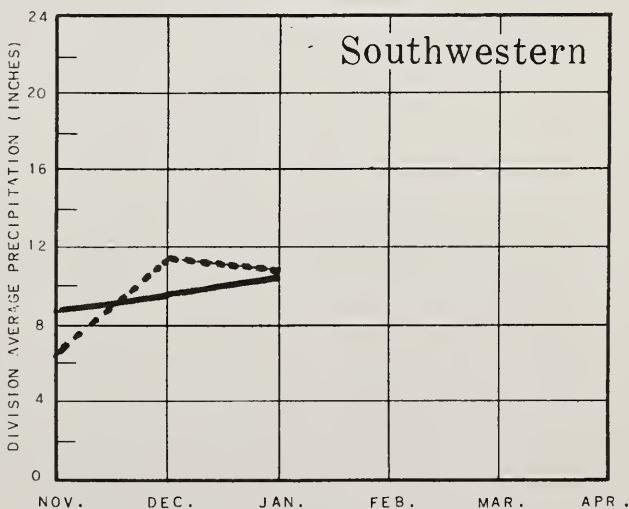
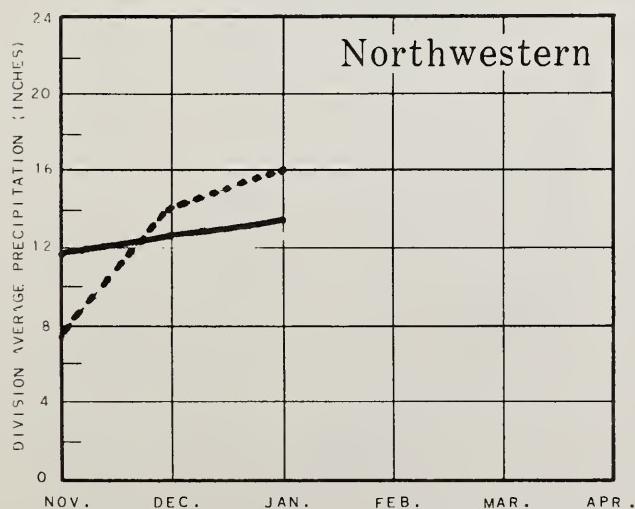
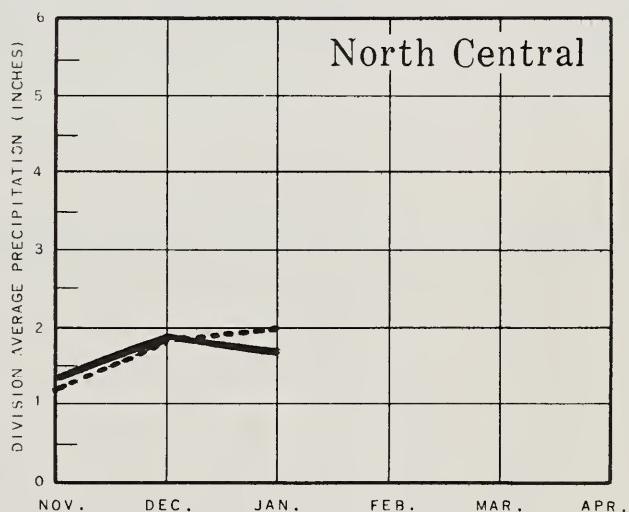
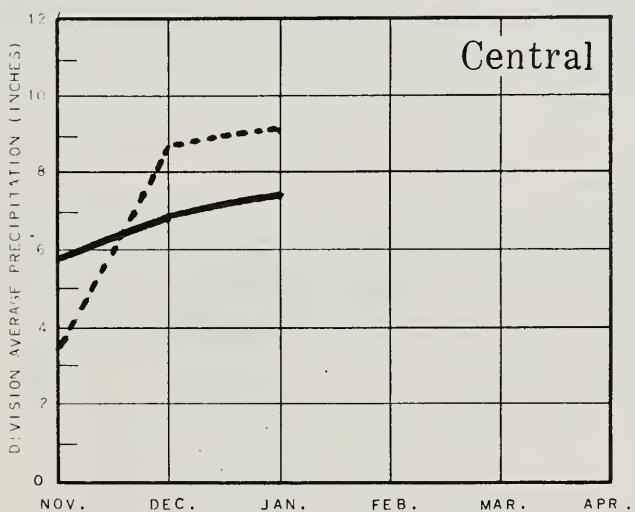
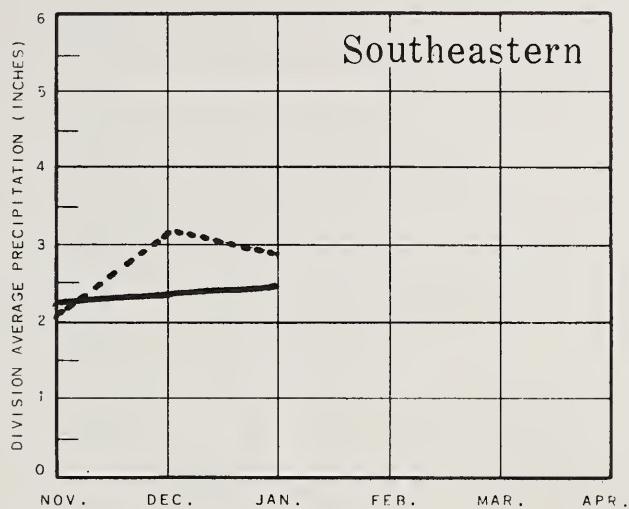
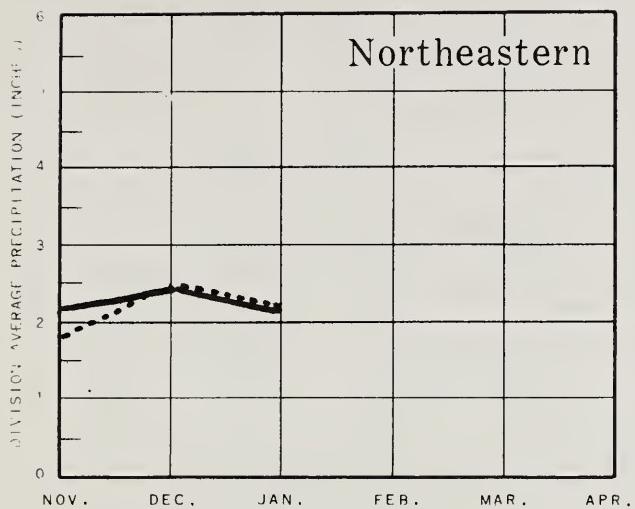
DRAINAGE AREAS



WASHINGTON VALLEY PRECIPITATION

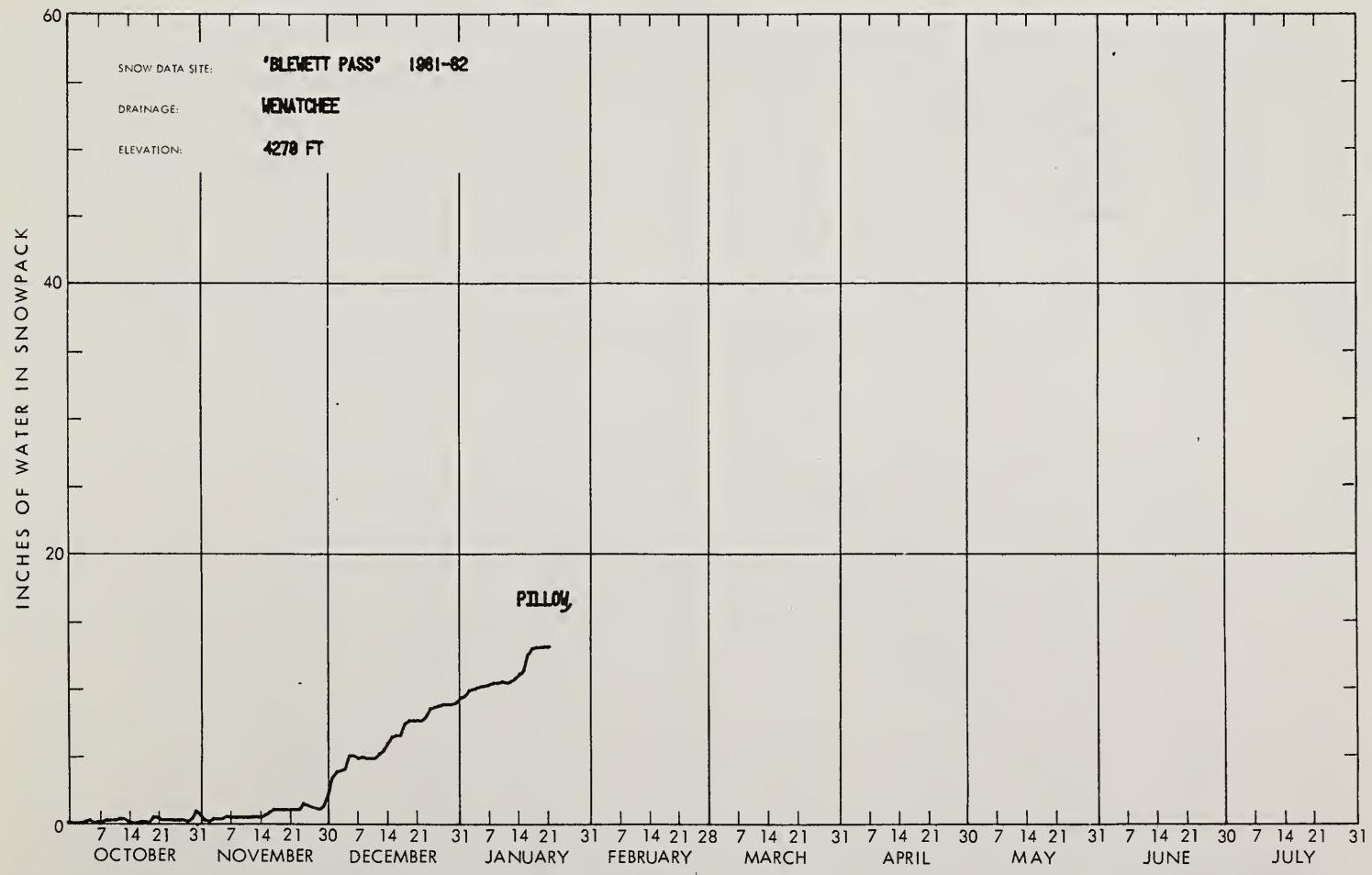
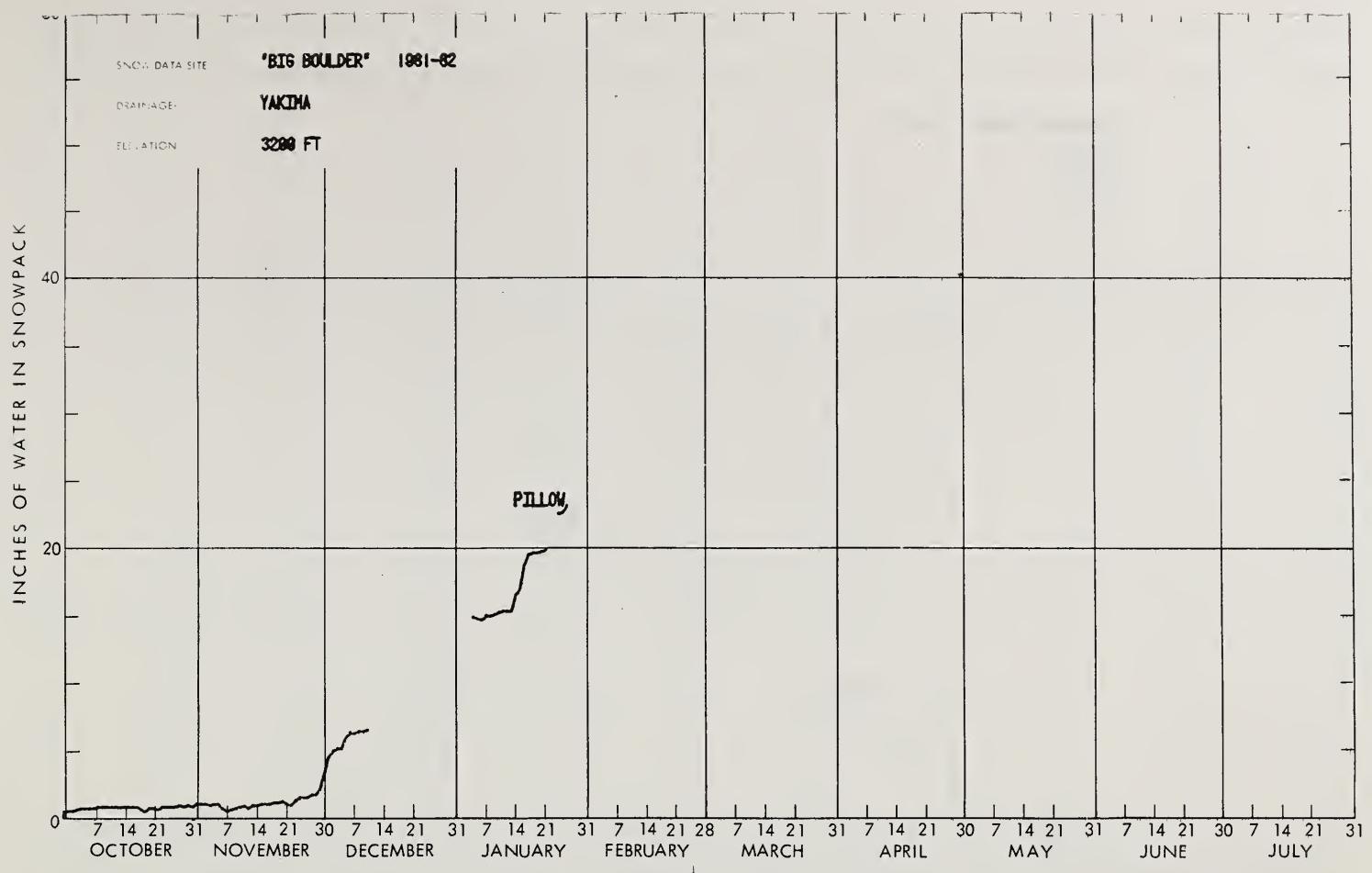
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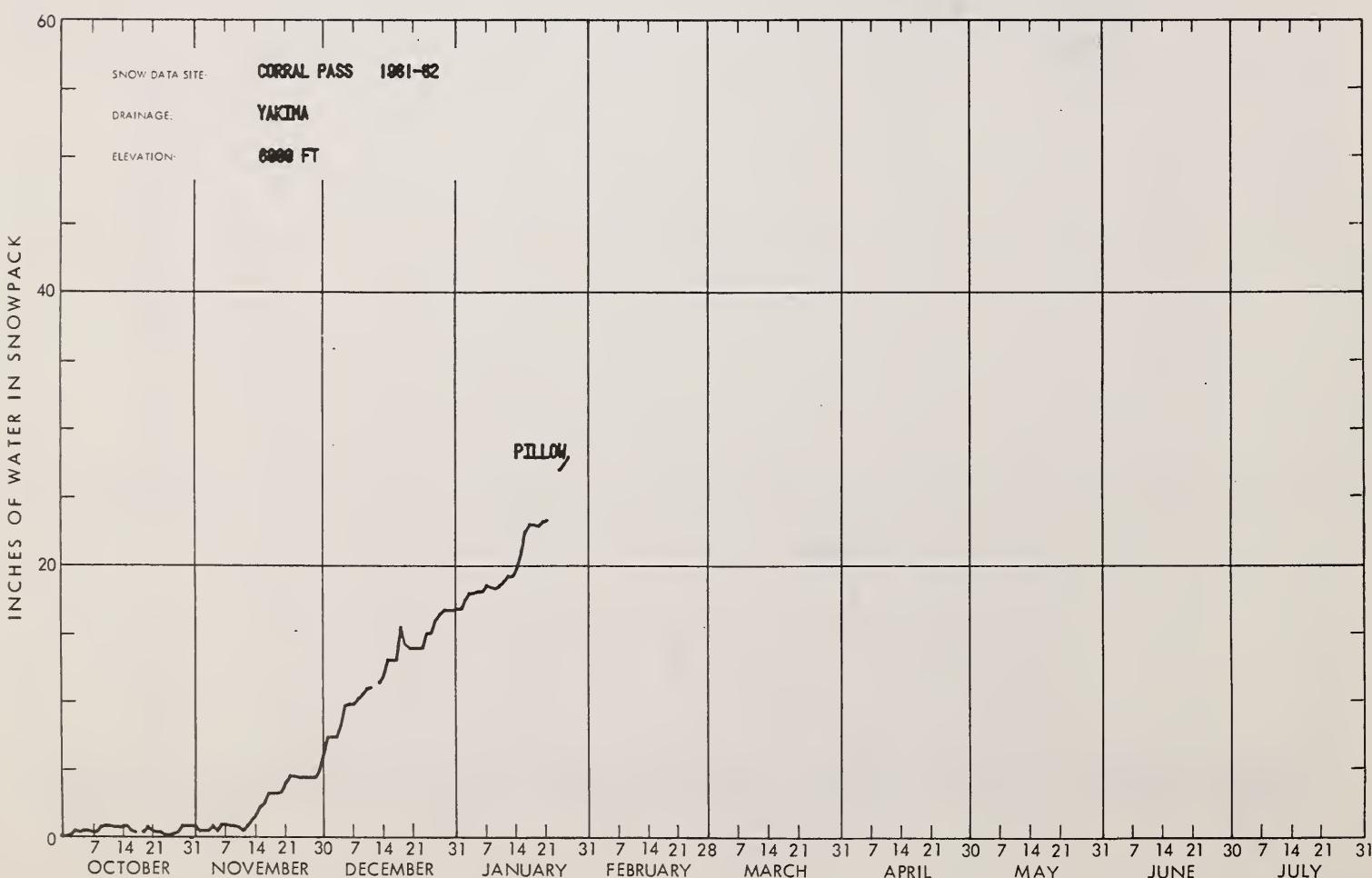
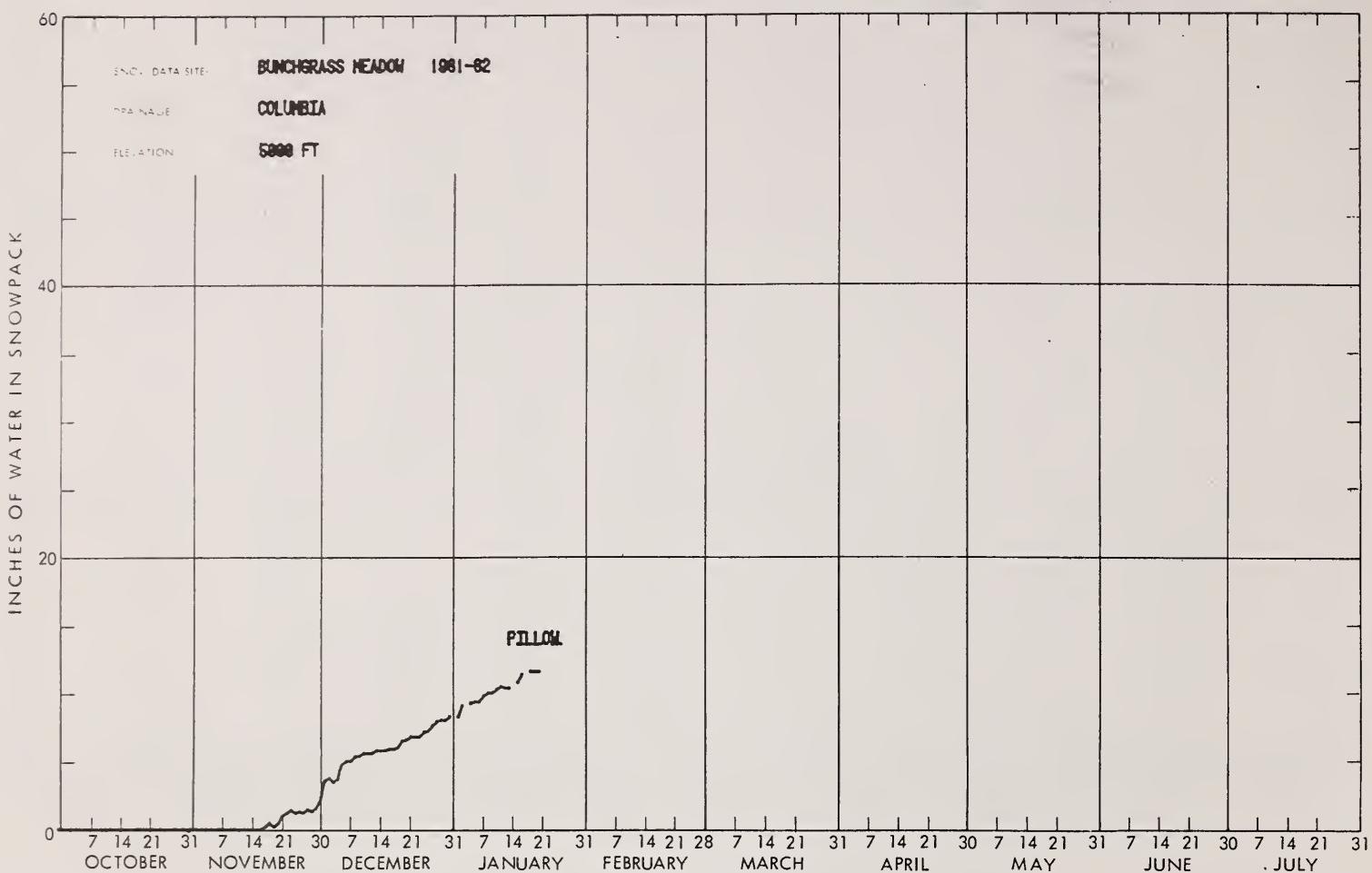
DRAINAGE AREAS

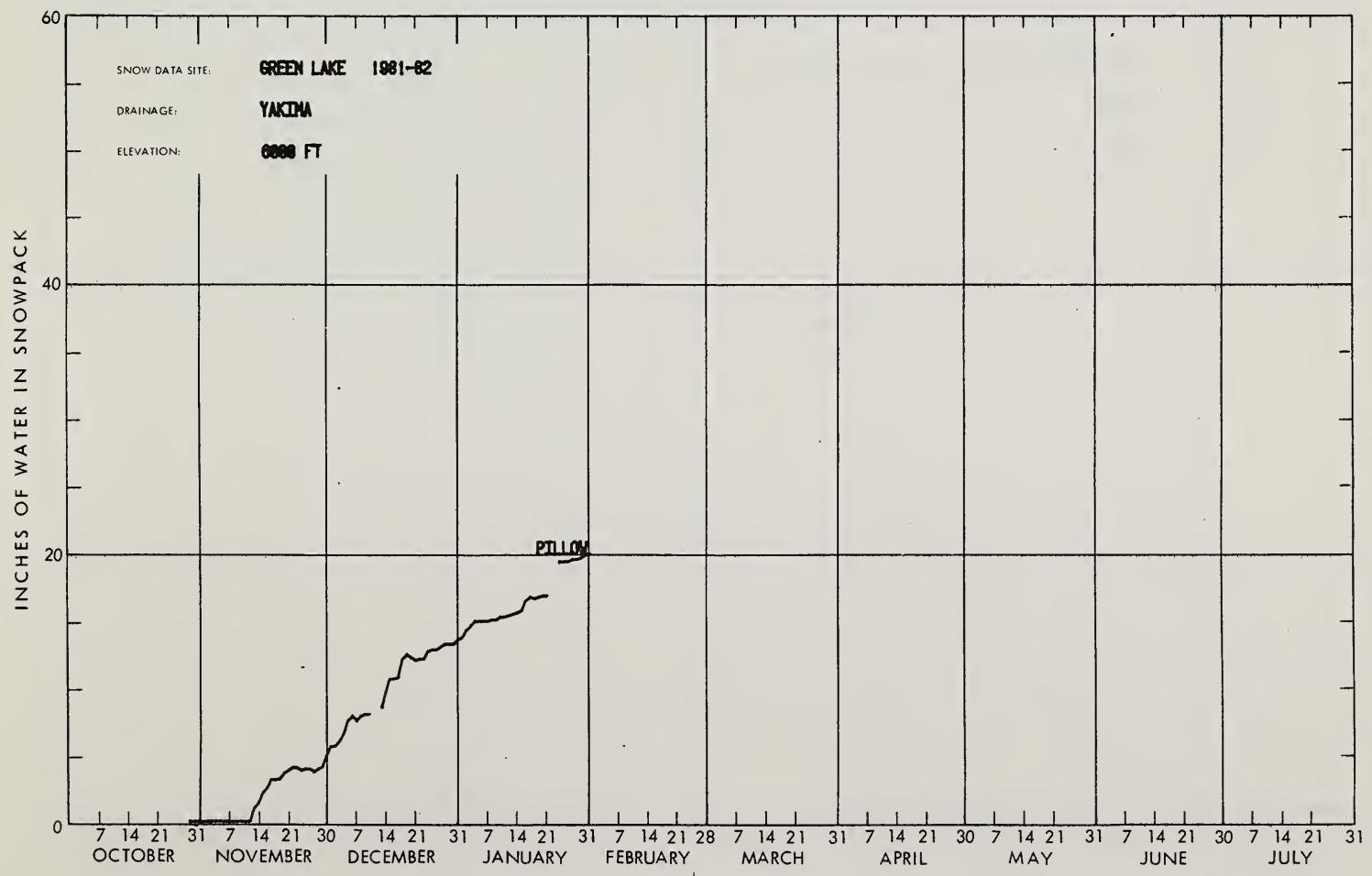
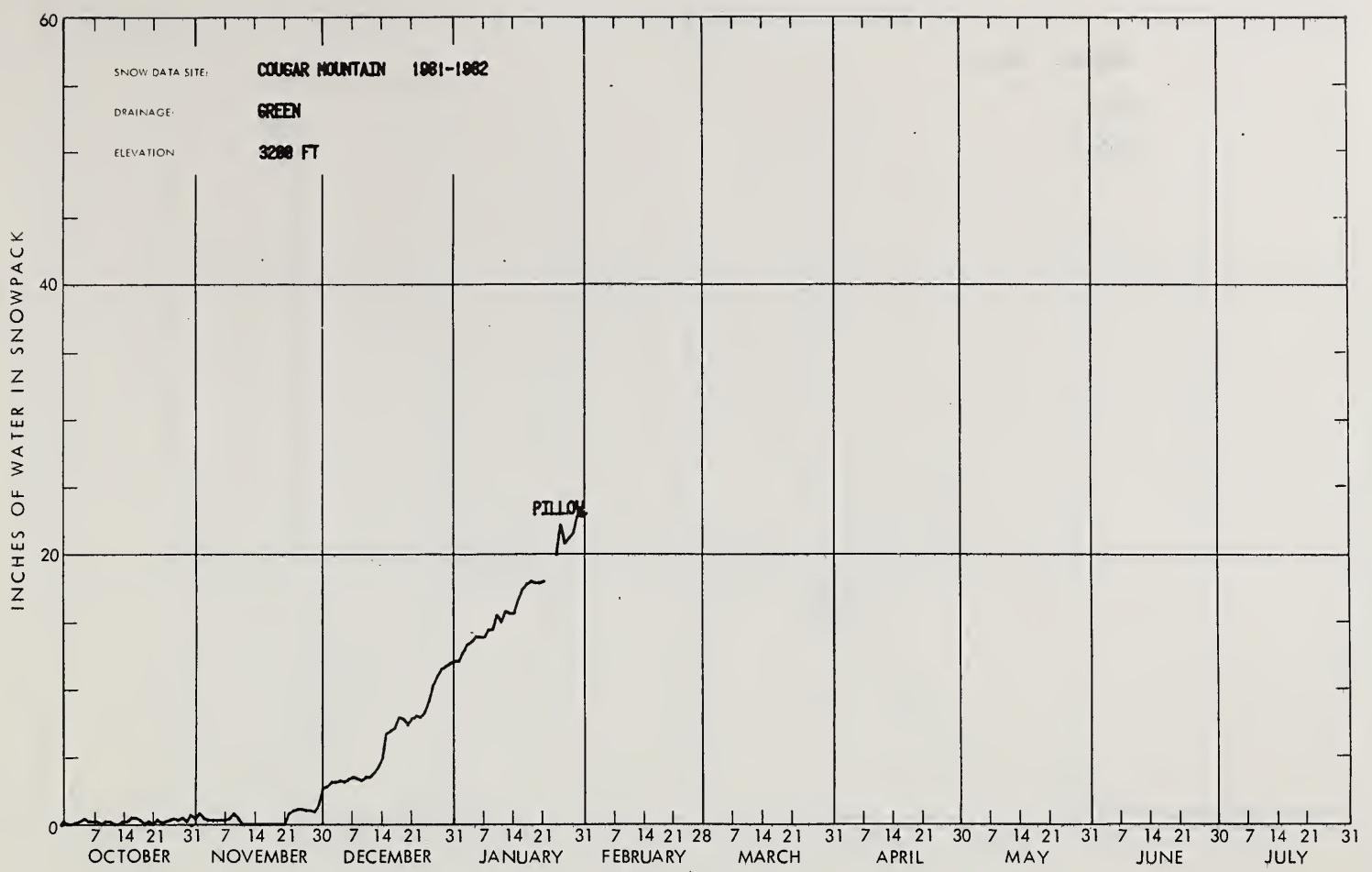


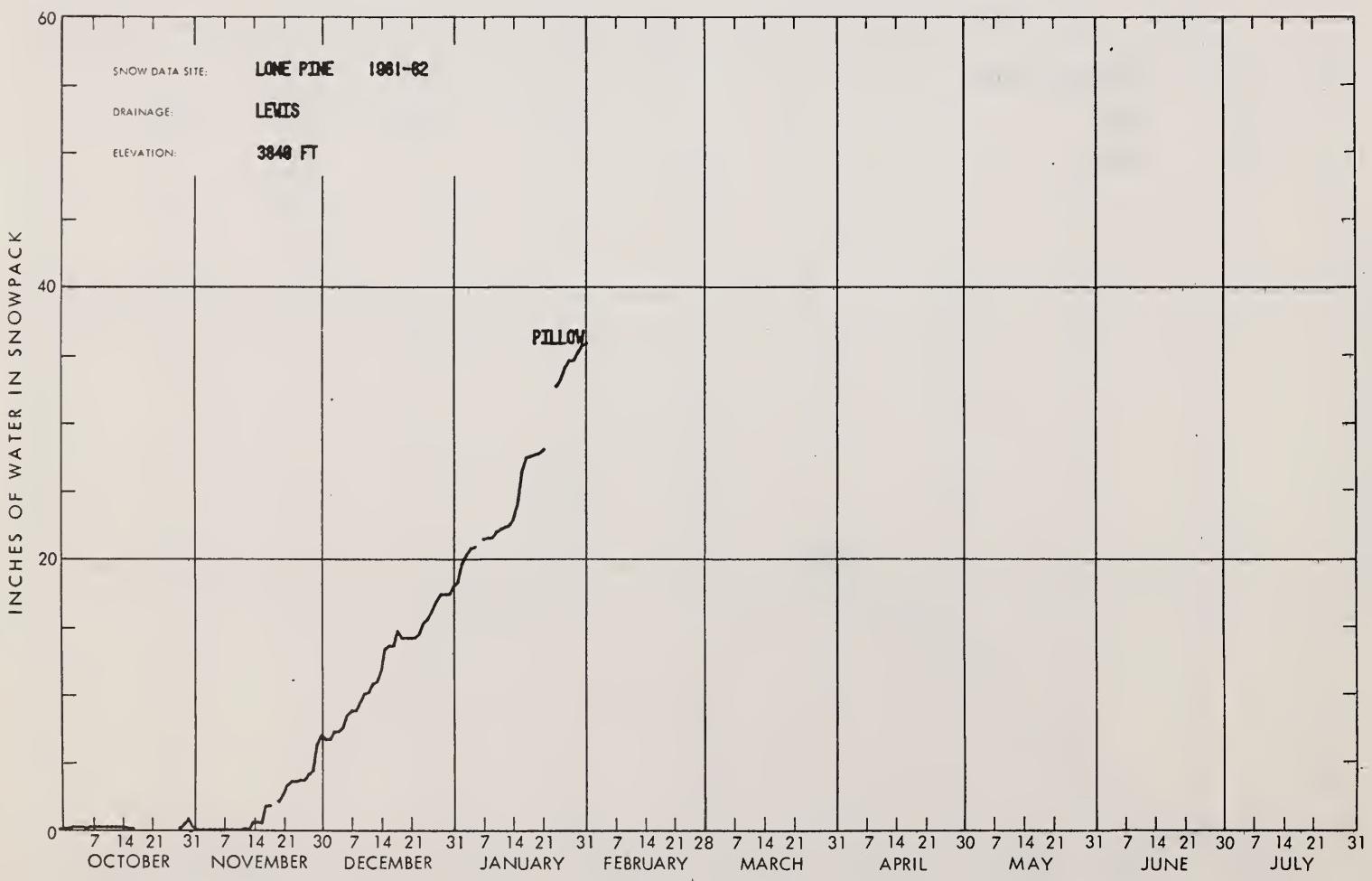
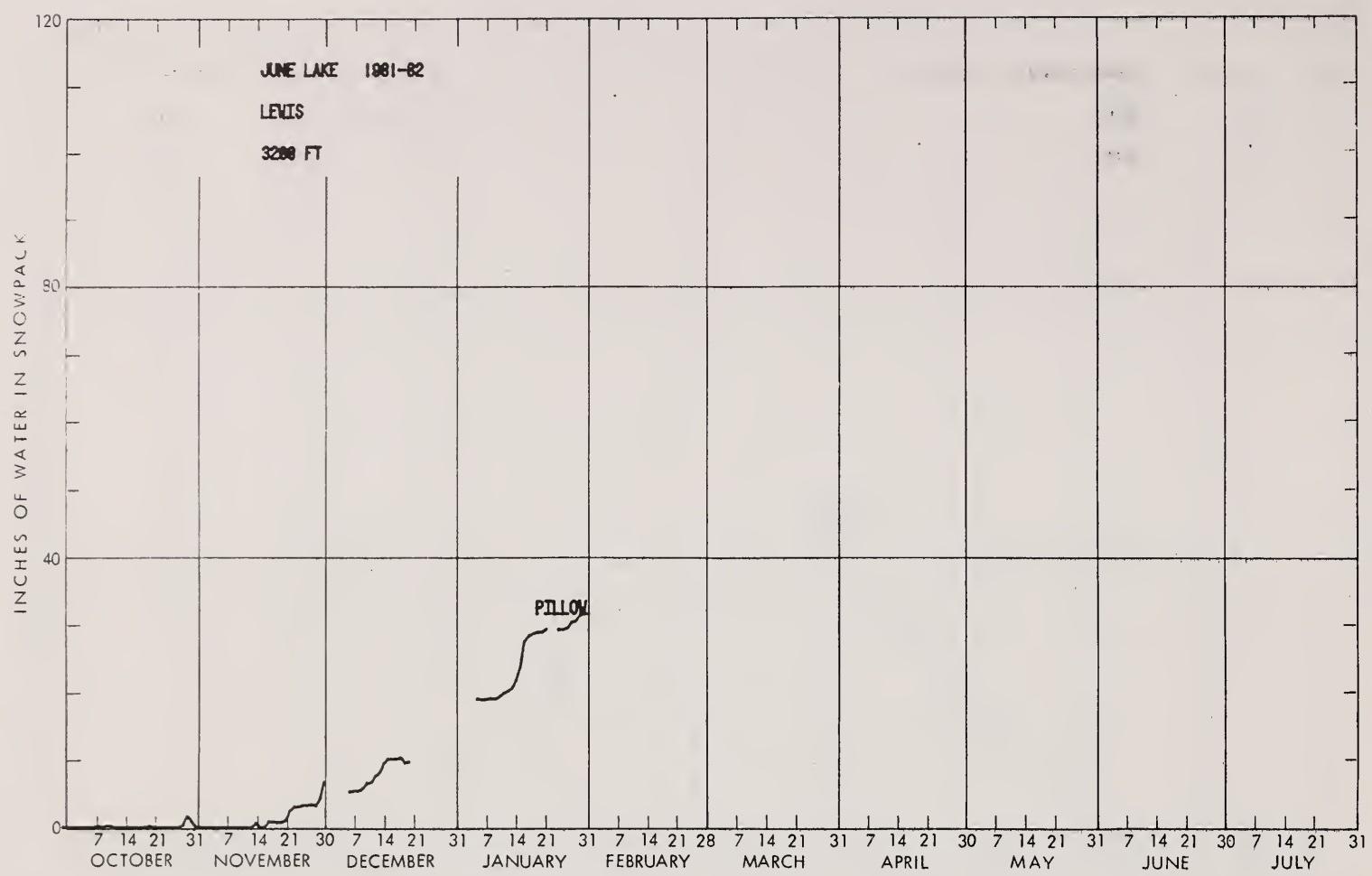
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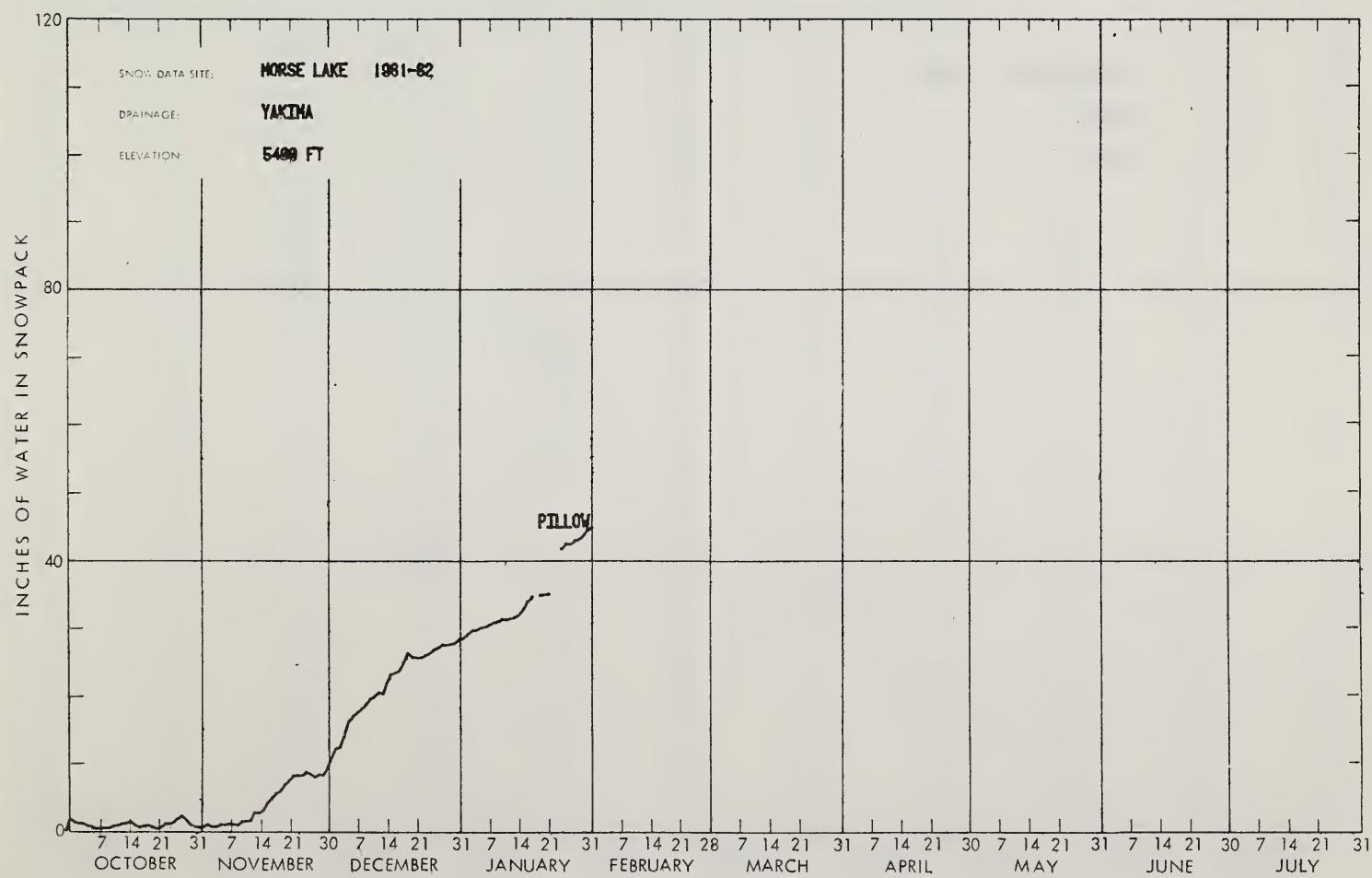
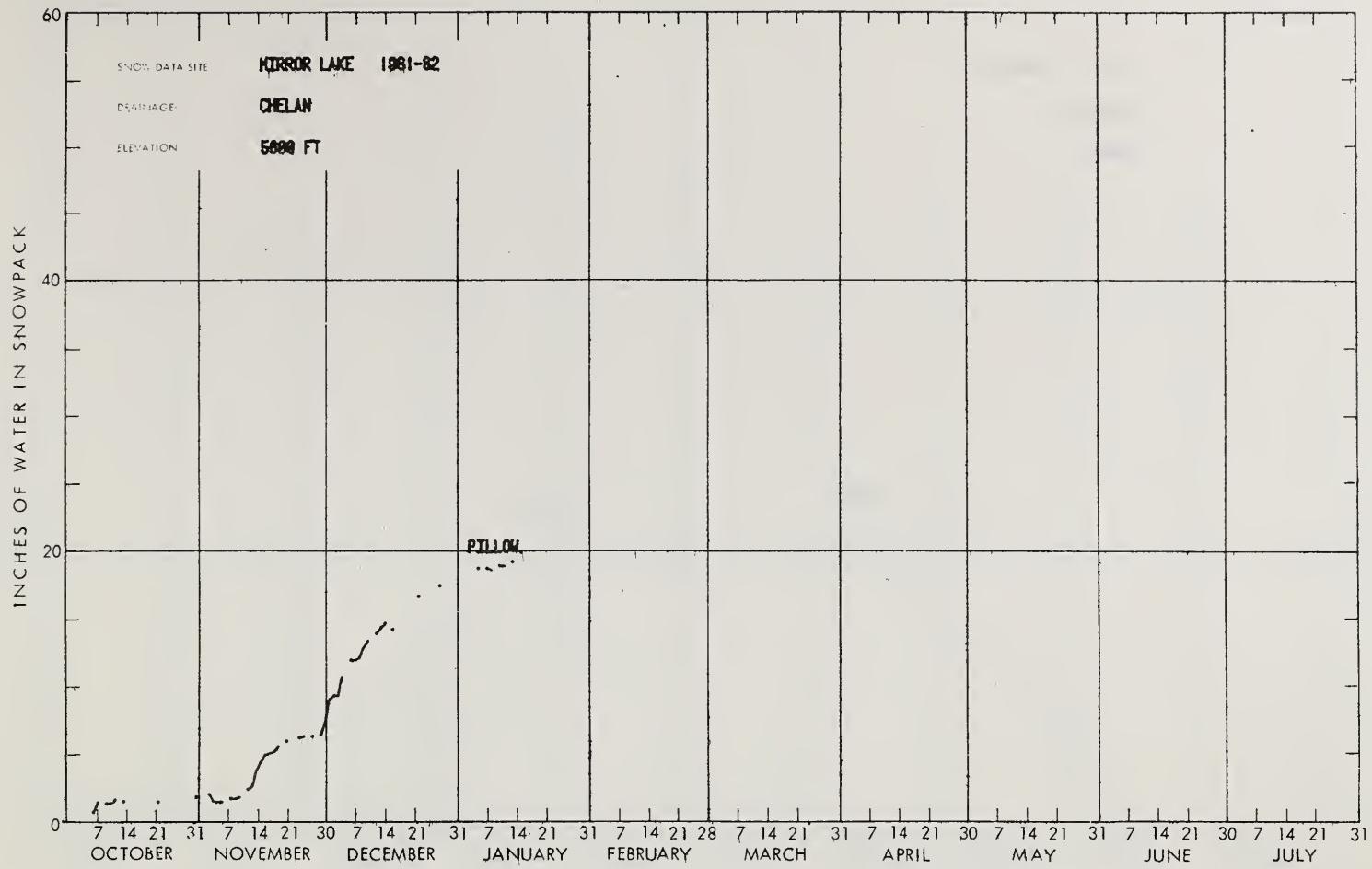
Preliminary Analysis by National Weather Service

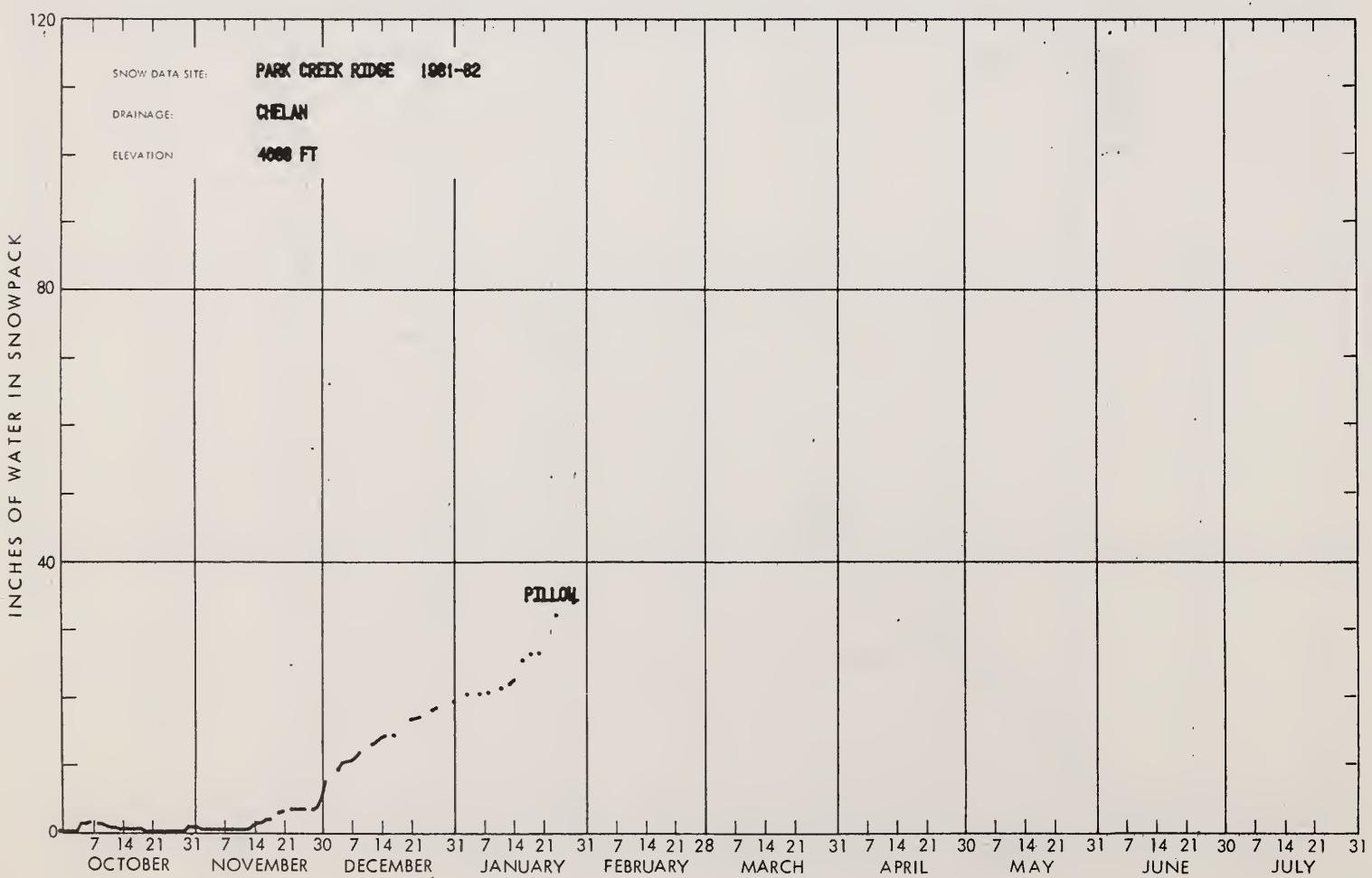
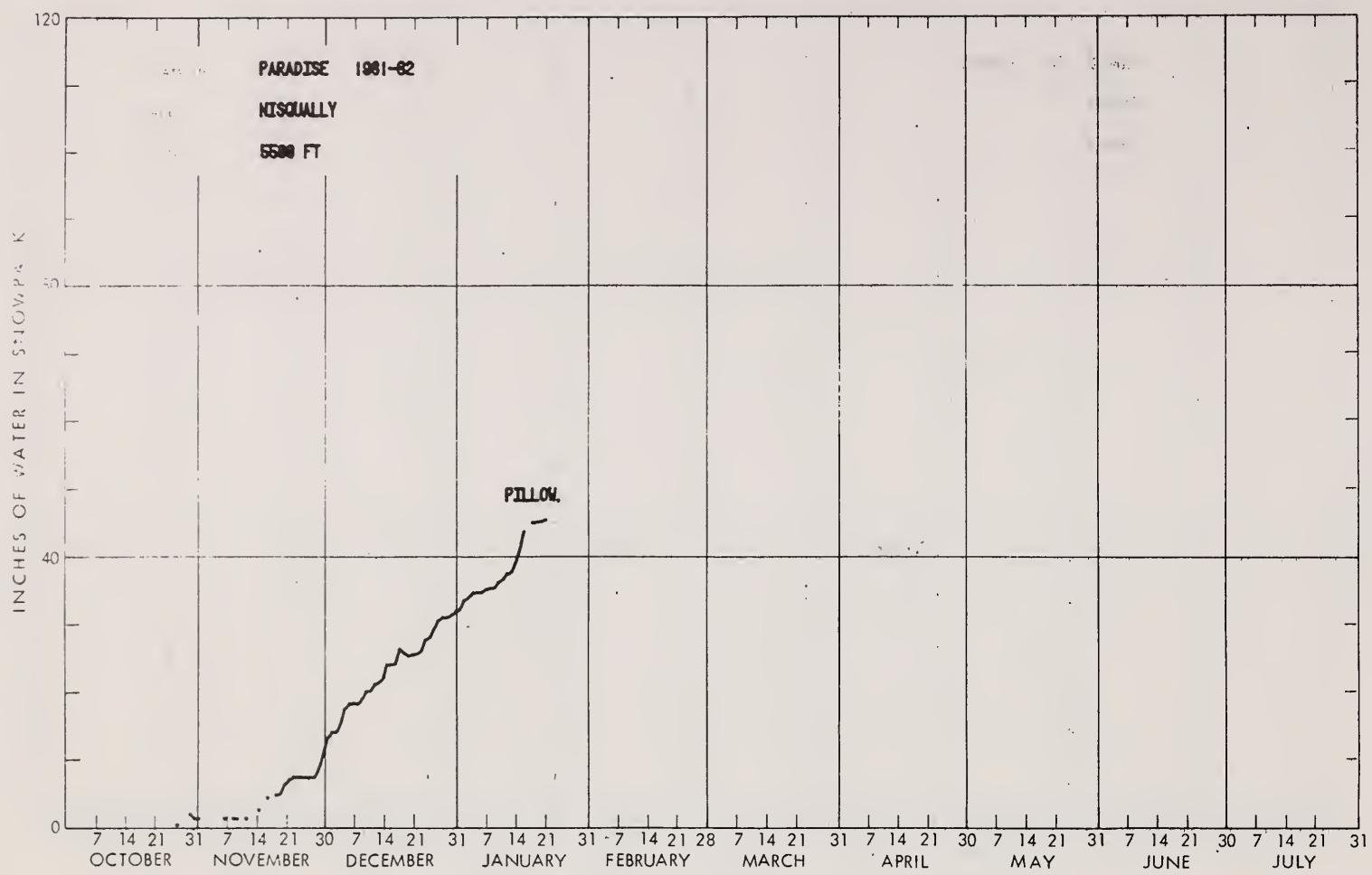


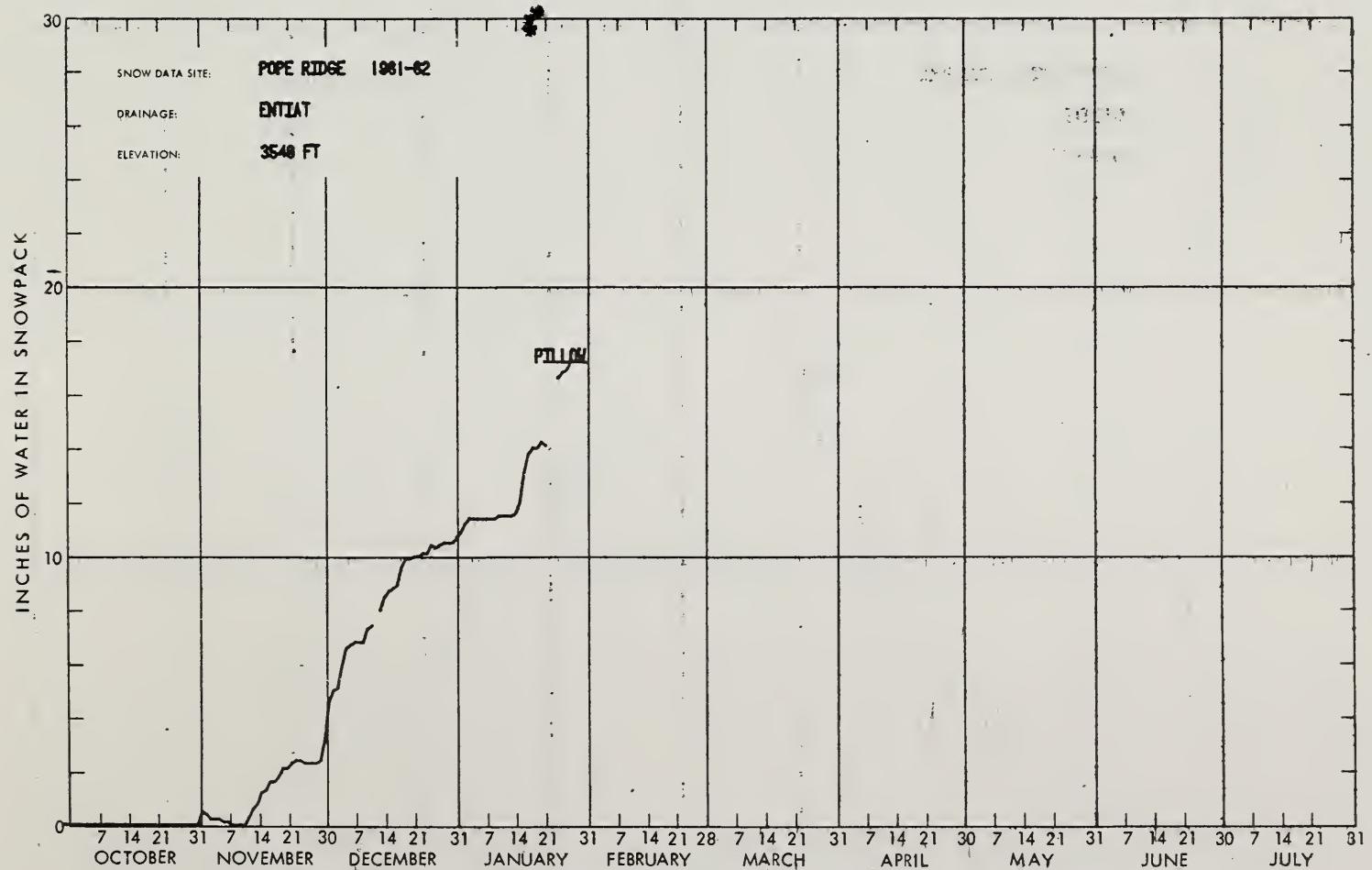
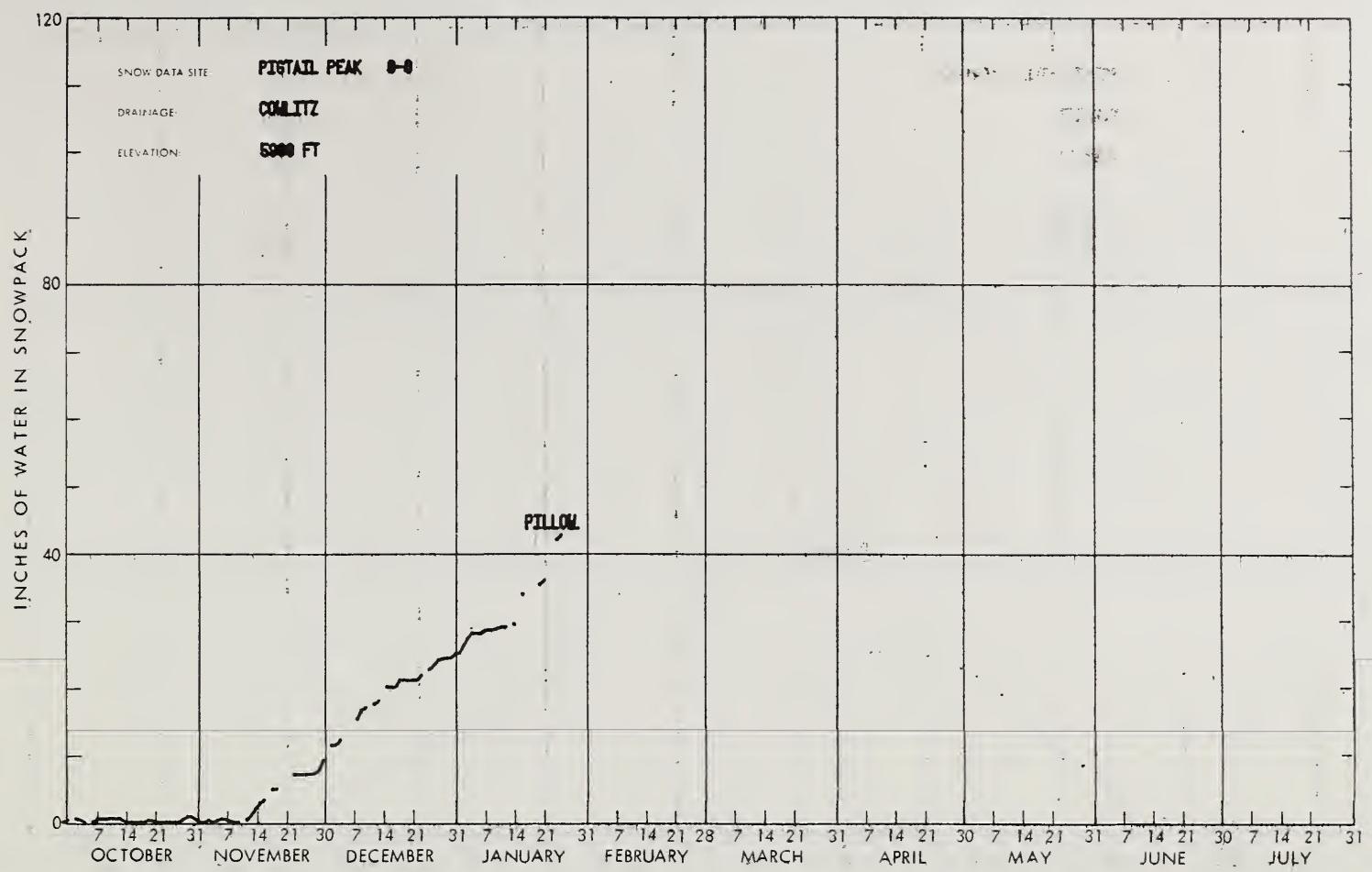


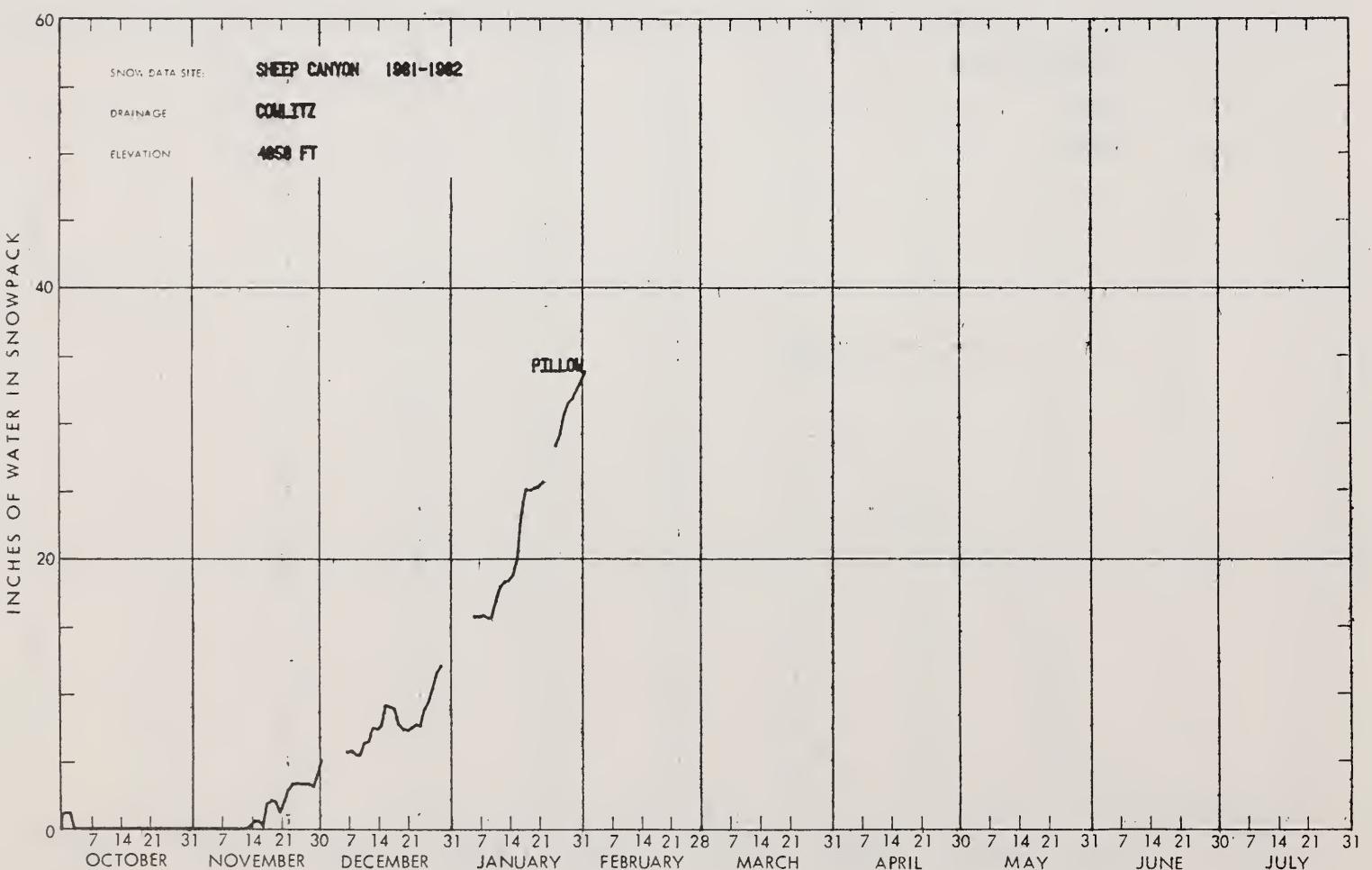
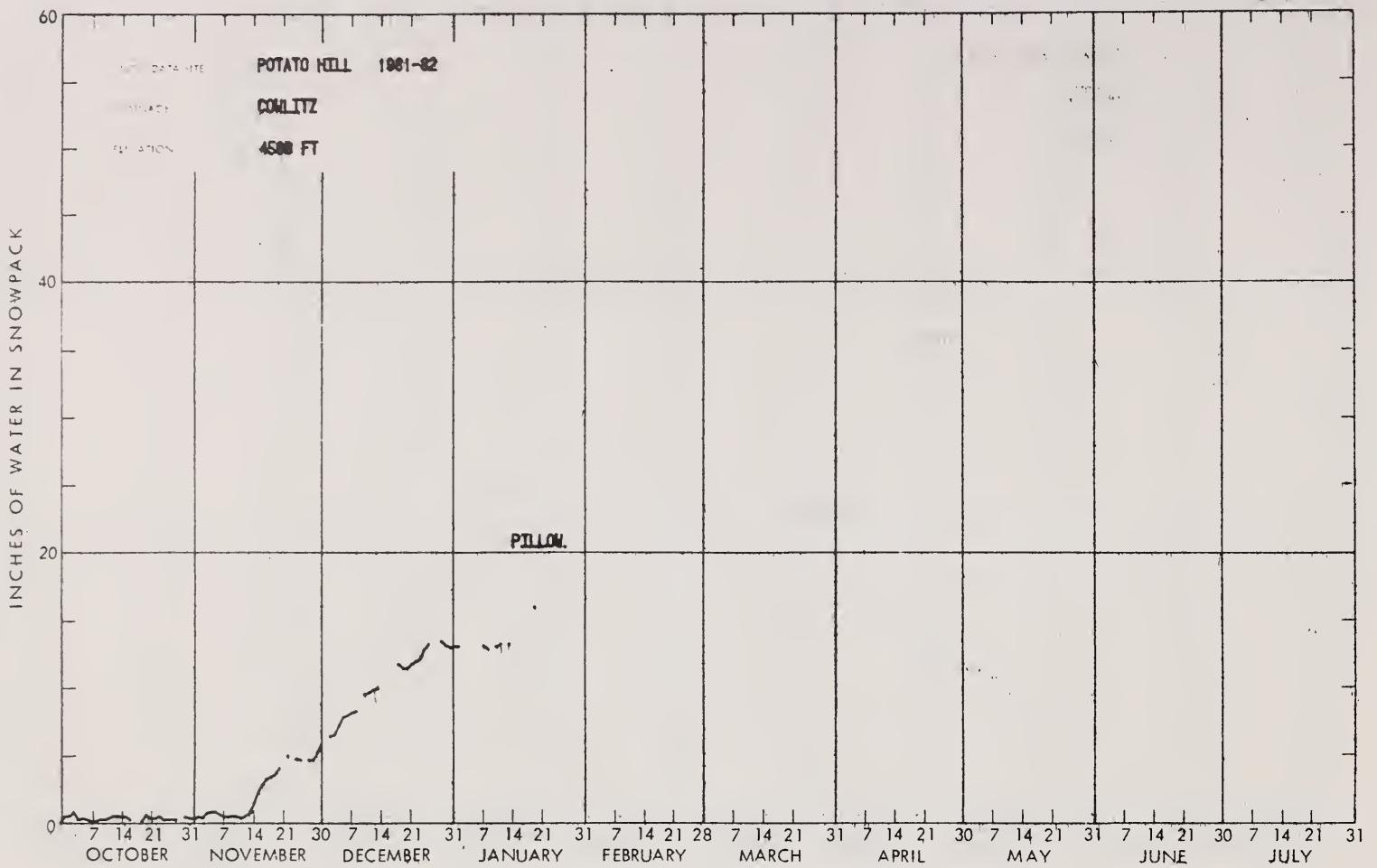


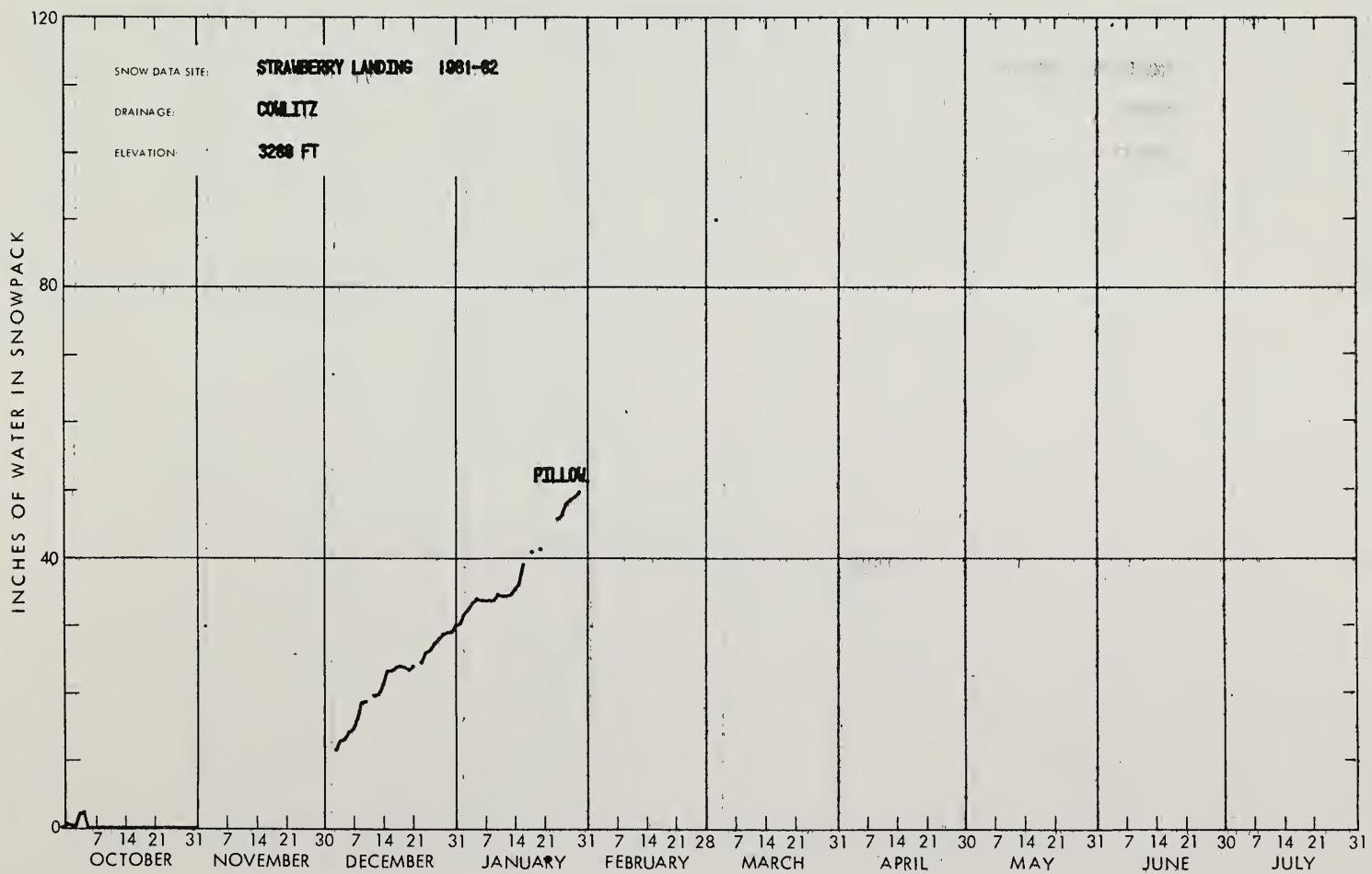
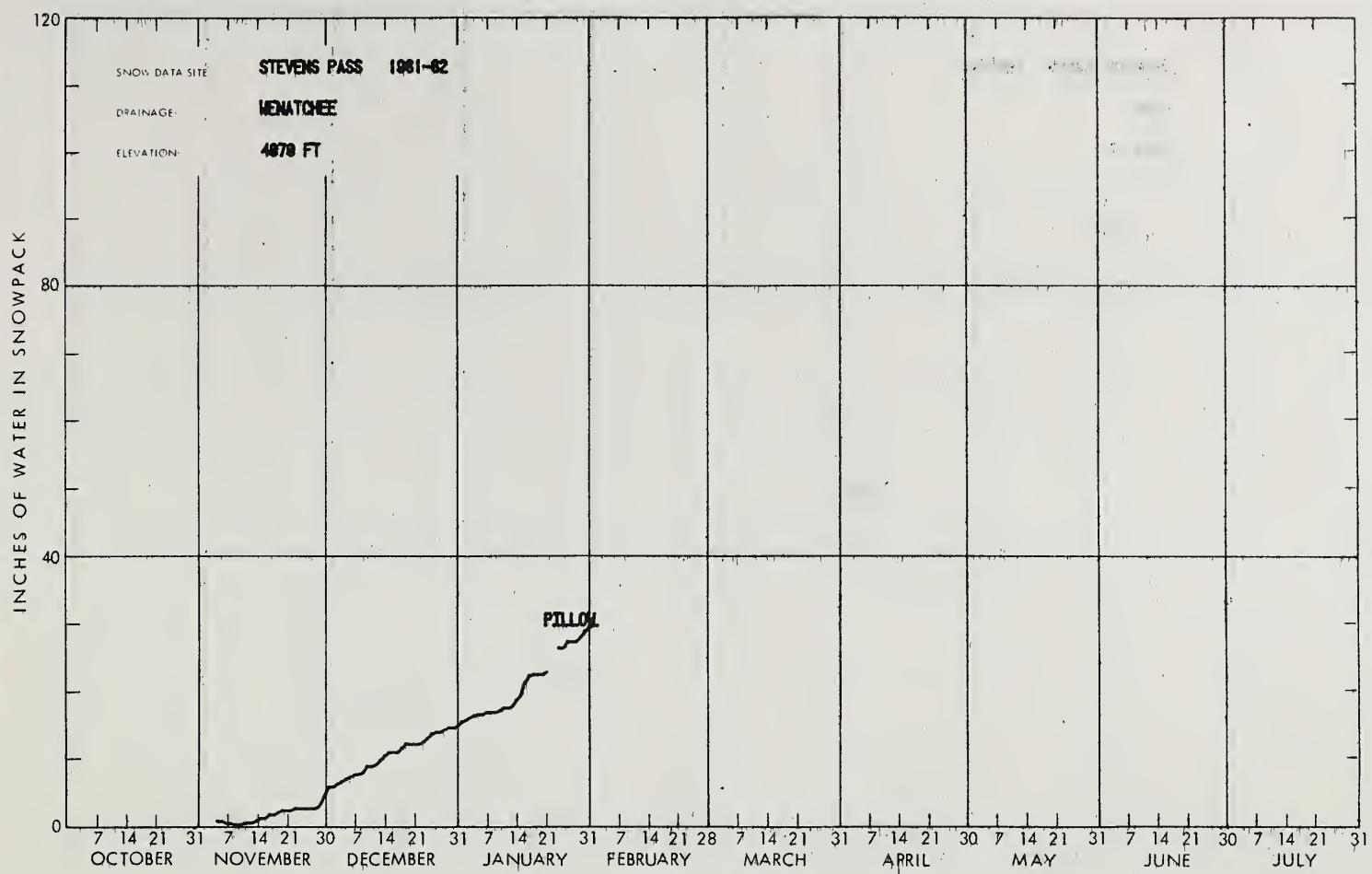


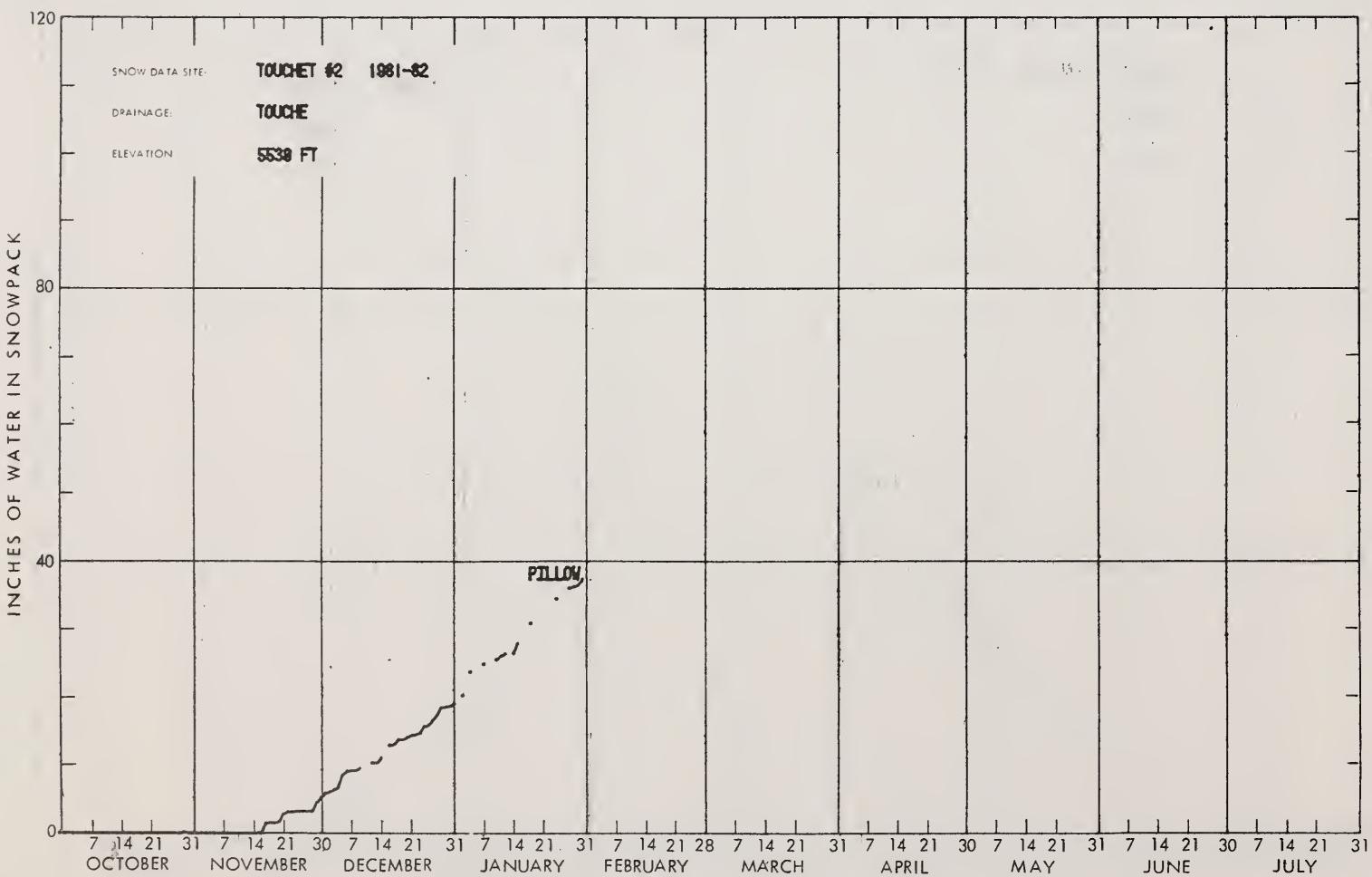
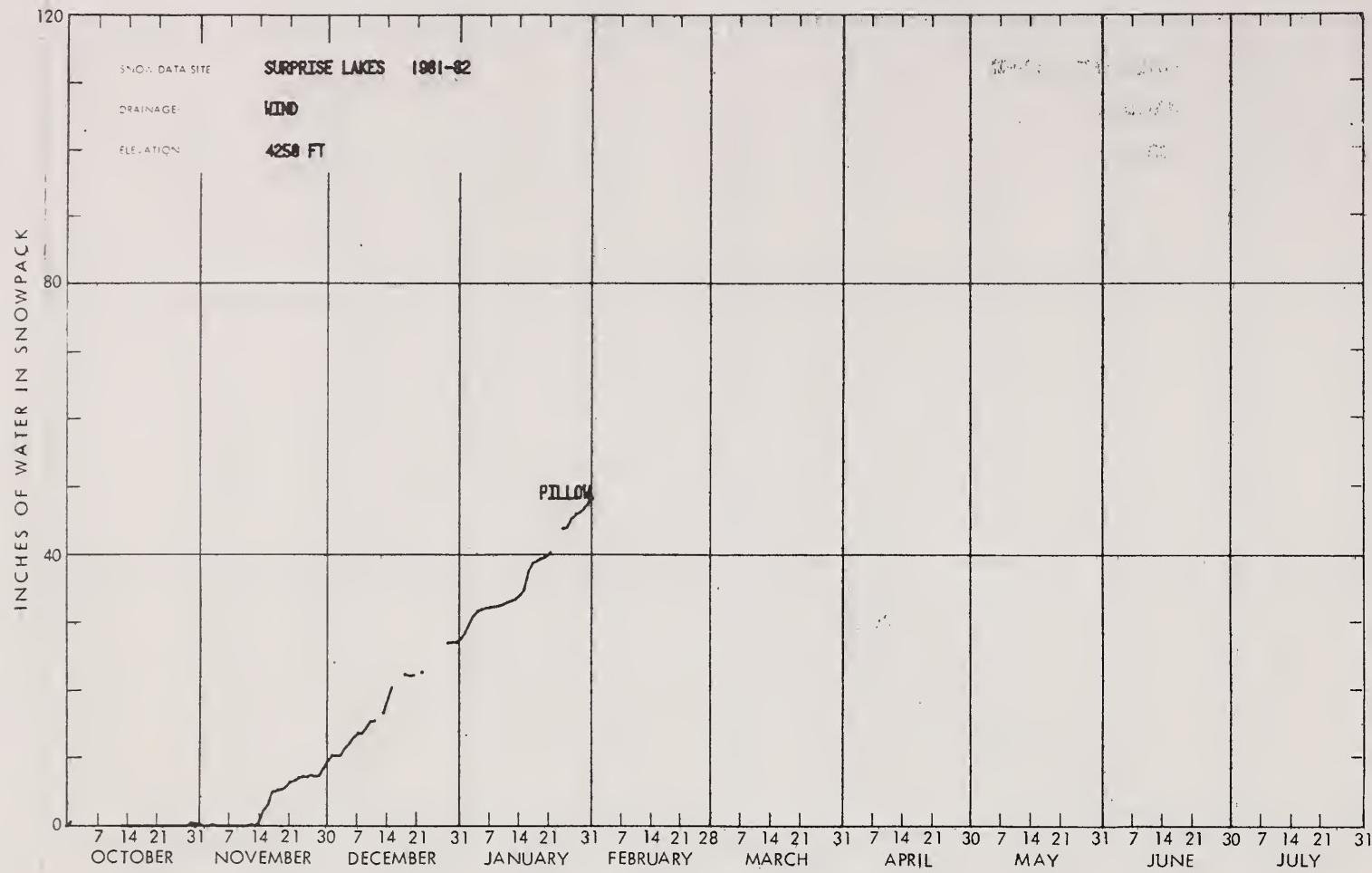


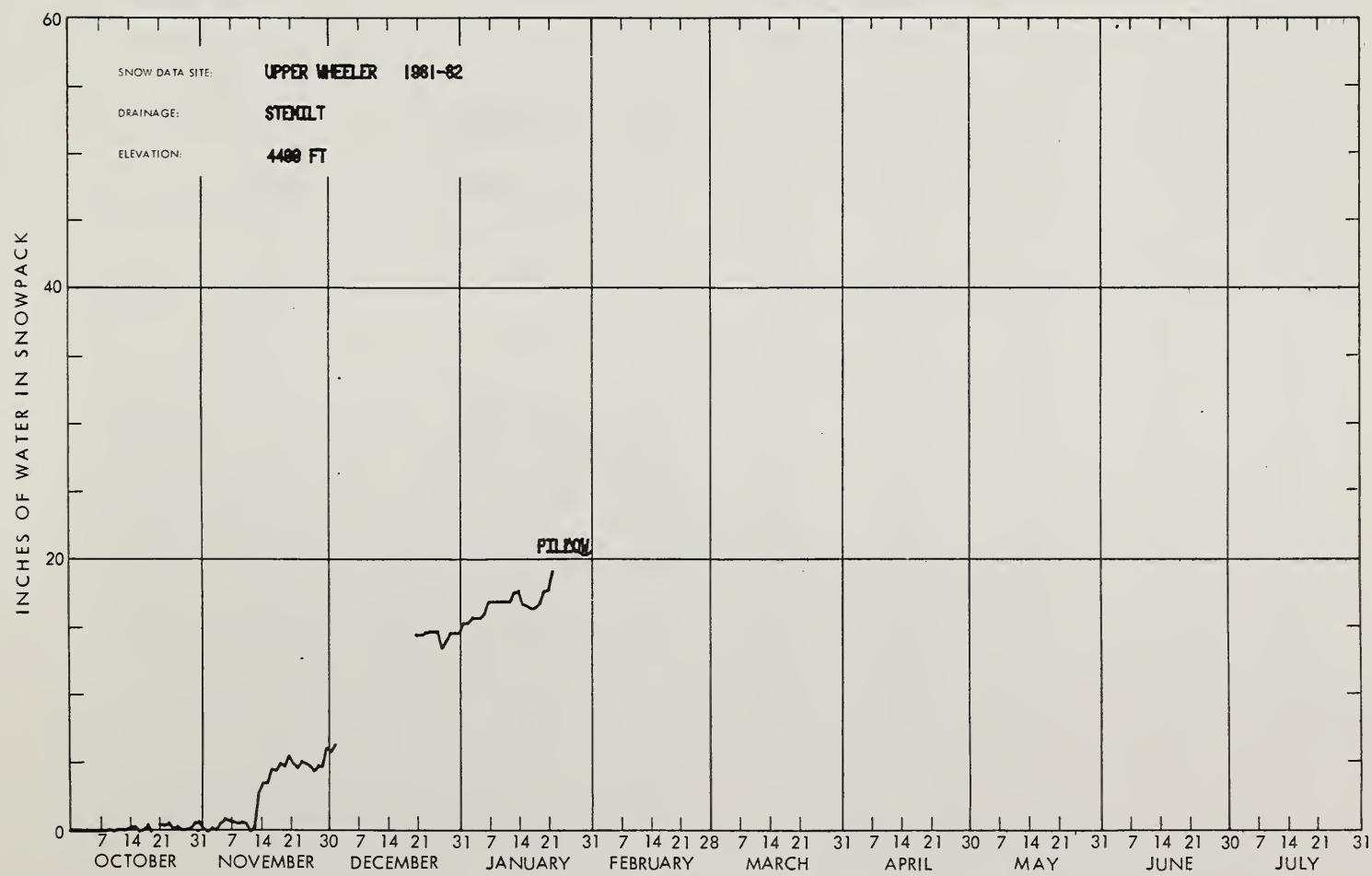
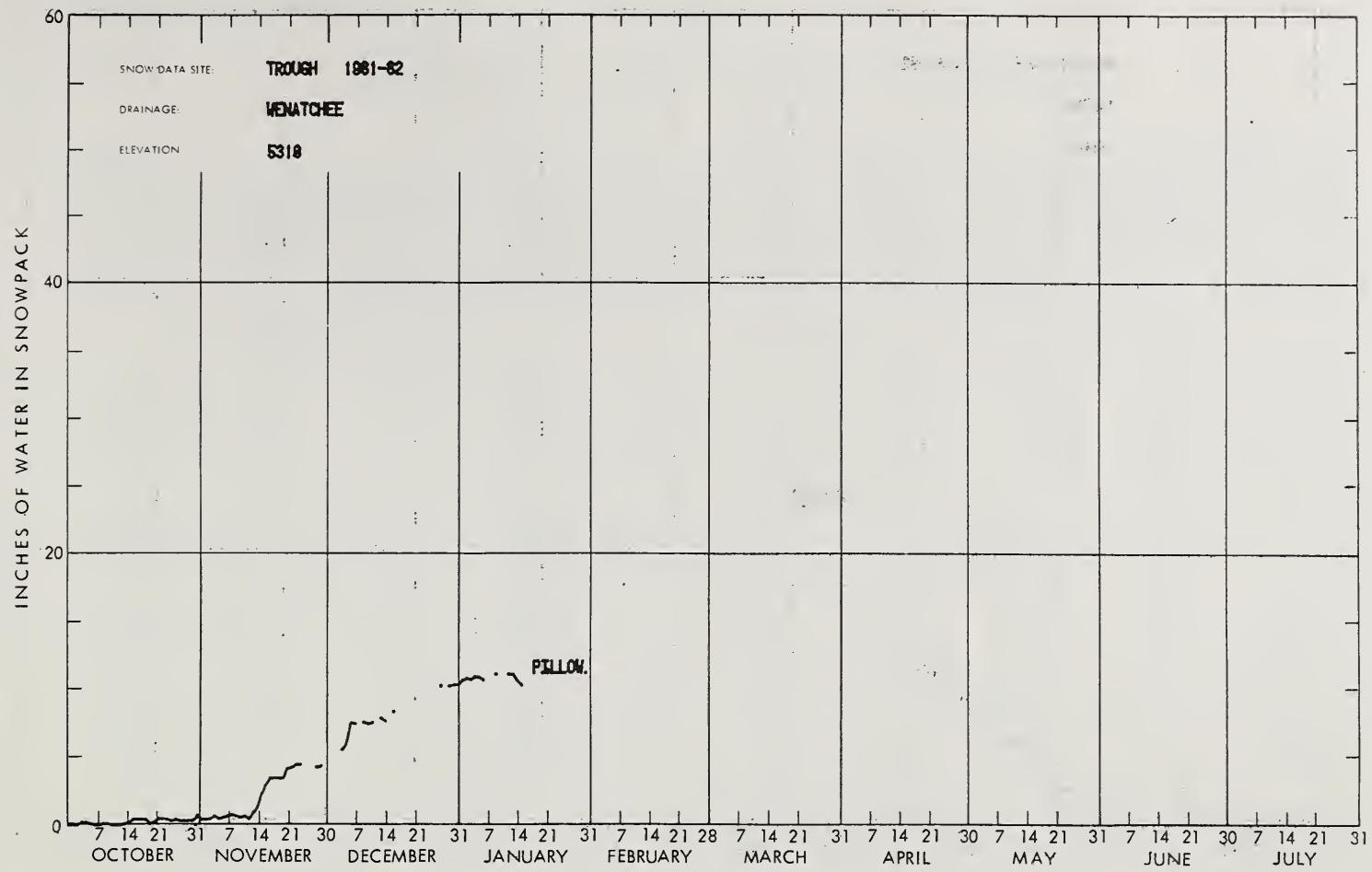


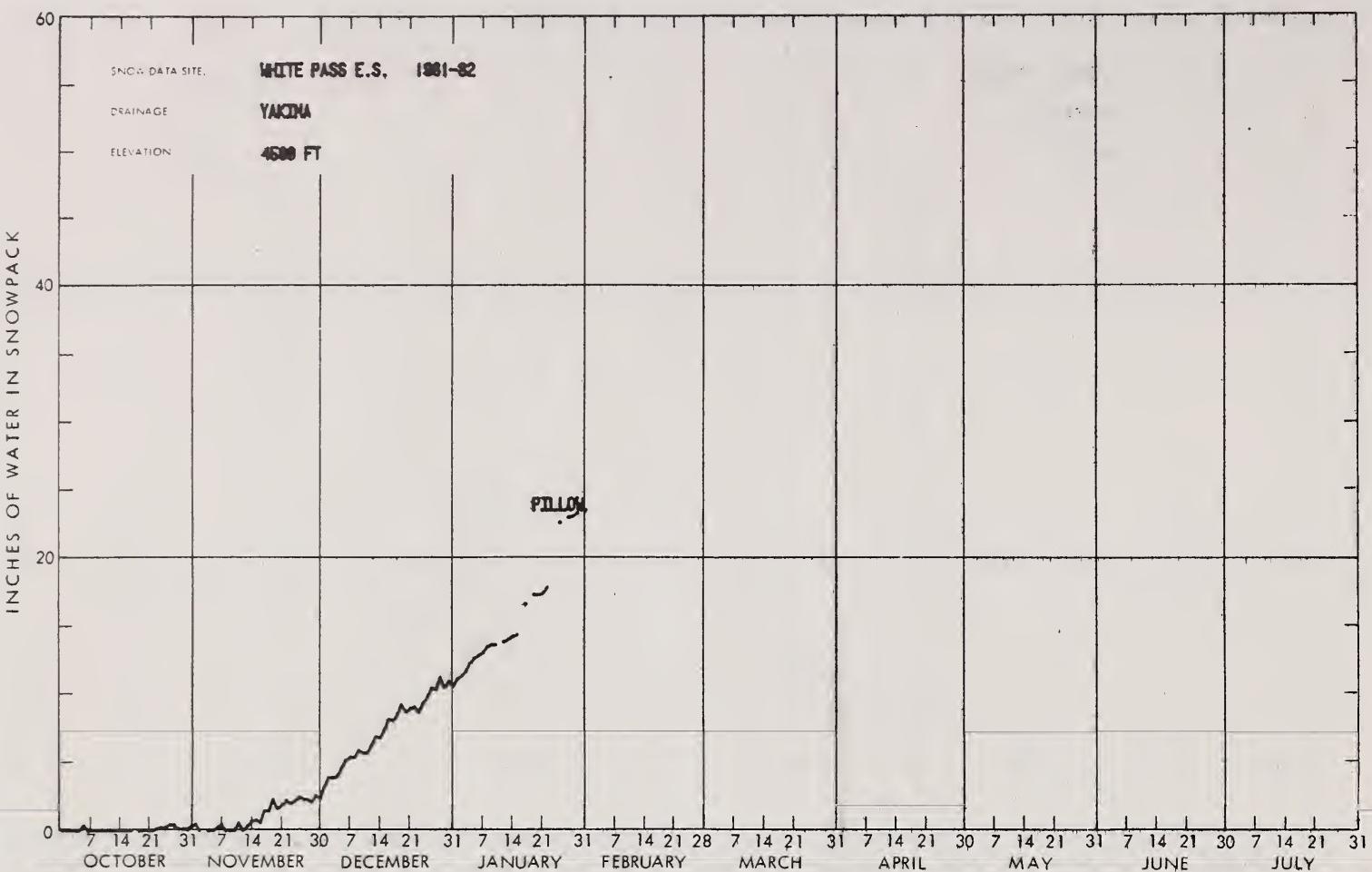












SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 1

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average #
<u>U P P E R C O L U M B I A D R A I N A G E</u>								

PEND OREILLE RIVER

Benton Meadow	16A02	2344	12/30	10	1.2	0.0	2.7
			1/28	25	5.9	0.0	5.2
Benton Spring	16A03	4900	12/30	25	5.9	6.3	7.5
			1/29	44	12.1	5.5	13.2
Chewelah	17A04	4925	1/30	38	10.0	5.7	11.5
Heart Lake Trail	14C10	4800	1/1	Not Measured		3.1	9.7
			1/27	68	16.3	3.6	12.8
Hoodoo Basin	15C10	6000	1/8	88	24.6	16.0	22.2
			1/27	120	37.2	20.4	39.7
Hoodoo Creek	15C01	5900	1/1	Not Measured		15.2	19.8
			1/27	114	33.0	16.6	37.2
Lookout	15B02	5250	12/30	48	12.2	8.0	13.8
			1/28	83	21.8	10.8	25.6
Nelson	2D04-Can	3050	12/30	20	4.1	10.0	7.3*
			2/1	48	12.7	9.0	10.9*
Schweitzer Bowl	16A06	4500	12/30	46	13.8	10.2	13.8
			1/29	70	21.8	-	23.1
Schweitzer Ridge	16A05	6100	12/30	56	18.0	19.2	21.3
			1/29	87	31.5	20.1	34.2
Winchester Creek	17A03	2970	1/27	32	7.2	1.2	9.1

KETTLE RIVER

Barnes Creek	2B06-Can	5300	12/29	27	5.7	9.7	8.8*
			2/2	67	15.3	10.0	13.3*
Big White Mtn.	2E03-Can	5500	1/31	57	14.5	-	13.4*
Boulder Road	18A02	1450	1/4	11	1.9	2.4	2.3
			1/27	22	5.3	1.2	3.9
Butte Creek	18A03	4070	1/4	24	3.4	3.3	4.0
			1/27	31	7.0	3.8	6.9
Cabin Creek	18A08	3170	1/4	19	3.3	3.7	3.7
			1/27	28	6.8	4.8	6.0
Carmi	2E02-Can	4100	2/1	27	5.5	2.4	5.0*
Farron # 1	2B02-Can	4000	1/28	46	11.4	6.7	9.3*
Farron # 2	2B02A-Can	4000	1/28	44	11.3	7.0	8.1*
Goat Creek	18A04	3595	1/4	21	3.1	3.5	3.3
			1/27	29	6.2	3.7	5.4
Monashee Pass	2E01-Can	4500	12/29	19	3.6	7.3	6.4*
			2/2	50	11.3	7.6	9.4*
Snow Caps Creek	18A05	2150	1/4	12	2.1	3.0	2.5
			1/27	22	5.8	2.6	4.1
Snow Caps Trail	18A06	2720	1/4	16	3.1	3.2	2.9
			1/27	25	5.0	3.8	4.8

Average based on 1963-1977 Average

* Average for years of record

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 2

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average #

KETTLE RIVER (Cont.)

Summit G.S.	18A07	4600	1/4	17	3.0	2.8	3.5
			1/27	25	5.6	2.2	5.9
Trapping Creek Lower	2E05-Can	3050	1/31	26	4.7	2.0	4.1*
Trapping Creek Upper	2E04-Can	4450	1/30	40	8.5	3.4	7.0*

COLVILLE RIVER

Baird	17A06	3215	1/29	29	6.3	3.1	5.5
Carlson	18A09	2885	1/30	17	4.2	0.0	3.7
Chewelah	17A04	4925	1/30	38	10.0	5.7	11.5
Stranger Mountain	17A05	5990	1/30	35	7.9	2.7	10.0
Togo	18A10	3370	1/30	27	7.2	1.9	8.6

SPOKANE RIVER

Above Burke	15B08	4100	12/31	28	5.2	3.0	9.3
			2/1	61	14.2	4.8	16.4
4th of July Summit	16B03	3100	2/1	29	8.5	0.2	7.3
Lookout	15B02	5250	12/30	48	12.2	8.0	13.8
			1/28	83	21.8	10.8	25.6
Mosquito Ridge	16A04	5110	1/27	80	21.2	15.2	24.5
Ragged Ridge	17B02	3333	12/24	7	1.0	-	New
			2/1	24	5.6	-	New
Sherwin	16C01	3200	12/31	25	5.2	0.0	5.5
			1/20	48	13.2	0.7	10.7
Sunset	15B09A	5600	1/26	81	23.5	8.0	27.4

OKANOGAN RIVER

Aberdeen Lake	1F01A-Can	4300	1/29	28	6.3	1.9	5.0*
Blackwall Peak	2G03-Can	6250	12/30	45	10.8	13.7	15.5*
			1/28	93	21.7	14.9	23.9*
Brenda Mine	2F18-Can	4800	12/29	22	4.3	4.3	6.5*
			1/28	42	8.8	5.4	9.4*
Brookmere	1C01-Can	3200	12/31	20	6.0	3.7	3.5*
			1/31	32	7.3	4.8	6.9*
Enderby	1F04-Can	6250	12/30	76	17.8	21.2	18.2*
			1/29	108	32.5	23.3	24.6*
Grayback Res.	2F08-Can	5225	1/29	32	6.1	2.4	6.2*
Hamilton Hill	2G06-Can	4900	1/27	51	9.4	4.5	10.4*
Harts Pass	20A05A	6500	1/29	110	30.0	18.8	34.2
Horseshoe Basin +	19A05a	7000	2/3	66	17.8	-	12.8
Isonok Lake	2F11-Can	6300	12/29	13	1.6	0.6	3.9*
			1/31	28	5.9	1.0	5.9*
Lost Horse Mtn.	2G04-Can	6300				2.8	6.7*

Average based on 1963-1977 Average

* Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 3

SNOW

DRAINAGE BASIN and/or SNOW COURSE			Date of Survey	THIS YEAR		PAST RECORD	
NAME	Number	Elevation		Snow Depth (Inches)	Water Content (Inches)	Last Year	Average [#]

OKANOGAN RIVER (Cont.)

Loup Loup	19A07	4650	1/27	32	8.1	4.4	7.4
McCulloch	2F03-Can	4200	12/31	13	1.2	2.9	3.2*
			1/30	29	3.6	1.5	4.8*
Misssezula Mtn.	2G05-Can	5100	1/26	35	4.3	2.4	6.7*
Mission Creek	2F05-Can	6000	12/30	34	5.7	5.8	8.7*
			1/28	54	13.8	7.7	13.1*
Monashee Pass	2E01-Can	4500	12/29	19	3.6	7.3	6.4*
			2/2	50	11.3	7.6	9.4*
Mount Kobau	2F12-Can	5950	12/27	28	7.5	3.1	3.2*
			1/31	40	11.1	5.5	8.5*
Muckamuck +	19A09a	6390	2/3	62	16.7	7.0	11.4
Mutton Creek No. 1	19A01	5700	1/27	49	14.2	4.7	10.8
Mutton Creek No. 2SP	19A11SP	6000	1/27	-	6.6	1.4	New
Oyama Lake	2F19-Can	4400	1/28	27	6.0	1.2	5.0*
Paysayten +	20A28a	4300	2/3	54	14.6	12.0	14.5
Postill Lake	2F07-Can	4500	1/29	31	6.0	3.3	5.8*
Rusty Creek	19A03	4000	1/27	26	6.0	3.0	5.6
Salmon Meadows	19A02	4500	1/27	36	8.1	5.5	7.5
Silver Star Mountain	2F10-Can	6050	12/28	43	11.2	9.8	13.9*
			1/30	79	23.1	12.2	18.7*
Starvation Mountain +	19A10a	6750	2/3	66	17.8	10.0	13.8
Summerland Reservoir	2F02-Can	4200	12/30	16	2.8	3.4	4.8*
			1/30	33	7.1	3.5	7.4*
Sunday Summit	2G01A-Can	4300	1/29	28	7.5	0.4	5.0*
Touts Coulee	19A06	2845	1/27	16	3.0	2.6	3.1
Trout Creek	2F01-Can	4700	1/28	28	5.8	1.3	5.3*
Vaseux Creek	2F20-Can	4600	12/31	12	2.4	2.0	2.6*
			2/1	24	4.1	2.7	4.4*
White Rocks Mtn.	2F09-Can	6000	12/29	41	9.8	5.4	9.5*
			2/1			7.5	16.7*

METHOW RIVER

Harts Pass	20A05A	6500	1/29	110	30.0	18.8	34.2
Horseshoe Basin +	19A05A	7000	2/3	66	17.8	-	12.8
Loup Loup	19A07	4650	1/27	32	8.1	4.4	7.4
Mutton Creek No. 1	19A01	5700	1/27	49	14.2	4.7	10.8
Mutton Creek No. 2SP	19A11SP	6000	1/27	-	6.6	4.5	New
Rusty Creek	19A03	4000	1/27	26	6.0	3.0	5.6
Salmon Meadows	19A02	4500	1/27	36	8.1	5.5	7.5
War Creek Pass +	20A31a	6500	2/1	Not Measured		-	36.2

CHELAN LAKE BASIN

Cloudy Pass +	20A22a	6500	Marker Down	20.4	30.0
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Average based on 1963-1977 Average

* Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 4

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average [#]

CHELAN LAKE BASIN (Cont.)

Little Meadows +	20A24a	5275	2/2	124	39.7	13.8	30.5
Lyman Lake +	20A23A	5900	2/2	156	49.9	21.3	39.8
Mirror Lake	20A39	5600	2/2	94	35.0	14.0	New
Park Creek Ridge	20A12A	5600	2/2	110	38.8	15.5	36.9
Rainy Pass	20A09	4780	1/27	108	29.8	15.0	30.9
Safety Harbor +	20A30a	6300	2/1	Not Measured		-	21.0
War Creek Pass +	20A31a	6500	2/1	Not Measured		-	36.2

ENTIAT RIVER

Blue Creek G.S. +	20B28a	5425	2/1	84	21.8	20.3	34.3
Brief	20B19	1600	1/23	32	7.6	1.3	7.0
Entiat Meadows +	20A33a	4540	2/1	132	34.3	23.1	32.2
Entiat River Trail +	20A34a	3325	2/1	70	18.9	9.5	14.5
Four Mile Ridge +	20B27a	6800	2/1	84	21.8	17.5	30.9
Fox Camp +	20A36a	6510	2/1	146	38.0	36.4	44.7
Pope Ridge	20B20	3450	1/27	62	16.4	6.6	15.2
Pugh Ridge	20A32a	6725	2/1	88	22.9	23.5	21.2
Shady Pass	20A37	6200	1/26	88	22.7	11.6	20.7
Snow Brushy +	20A35a	3910	2/1	117	31.6	13.2	30.5
Tommy Creek +	20B21a	4900	2/1	70	18.2	18.2	22.5

WENATCHEE RIVER

Berne Mill Creek	21B23	3170	11/30	16	3.0	1.0	4.7
			12/14	42	10.5	5.8	8.2
			12/29	64	14.5	5.8	11.0
			1/29	73	24.0	6.2	21.5
Berne Mill Creek New	21B41SP	3240	11/30	16	2.5	0.0	4.9
			12/29	53	14.1	1.9	11.6
			1/29	69	22.2	2.4	20.0
Blewett Pass No. 2	20B02	4270	11/25	4	1.0	-	-
			12/23	27	6.8	0.0	6.5
			1/22	48	12.6	0.7	13.2
Chiwaukum G.S.	20B16	1810	11/30	4	0.4	0.0	1.5
			12/14	19	4.0	3.6	3.5
			12/29	26	6.2	1.7	4.8
			1/28	45	10.9	3.4	9.5
Lake Wenatchee	20B05	1970	11/30	4	0.4	0.0	1.7
			12/14	24	4.1	4.0	4.0
			12/29	31	6.2	3.1	5.9
			1/28	55	14.1	3.2	11.8
Leavenworth R.S.	20B17	1127	11/27	0	0.0	0.0	0.7
			12/11	1.7	0.4	1.6	1.9
			12/30	15	2.7	1.3	2.9
			1/28	21	5.9	0.5	5.9
Lyman Lake +	20A23A	5900	2/2	156	49.9	21.3	39.8

Average based on 1963-1977 Average

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 5

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average + #

WENATCHEE RIVER (Cont.)

Merritt	20B18	2140	11/30	7	1.0	0.0	2.5
			12/14	27	4.9	4.7	5.2
			12/29	36	8.4	1.3	7.1
			1/28	58	16.0	2.7	14.0
Stevens Pass	21B01	4070	11/30	34	5.3	2.2	8.5
			12/14	63	16.2	8.8	14.6
			12/29	84	22.9	6.1	21.9
			1/28	119	38.5	7.0	37.3
Stevens Pass Sand Shed	21B45	3700	11/30	24	3.7	0.5	8.2
			12/14	50	12.8	5.6	13.5
			12/29	66	18.6	2.2	15.3
			1/28	94	30.4	2.8	27.1

COLOCKUM CREEK

Colockum Creek Upper	20B22	5300	1/27	35	10.6	1.1	11.7
Colockum Creek Lower	20B23	4300	1/27	30	7.8	3.2	8.5
Trough # 2	20B25SP	5310	1/27	44	11.5	1.0	New

SQUILCHUCK CREEK

Beehive Springs	20B03	4400	1/27	25	6.8	2.2	6.7
Scout-A-Vista	20B04	3400	1/27	27	6.3	3.2	6.9

STEMILT CREEK

Jump-Off	20B08	4450	1/26	30	8.4	1.2	7.1
Stemilt Slide	20B06	5000	1/26	41	12.1	3.3	11.2
Upper Wheeler	20B07	4400	1/26	27	8.4	1.0	8.4

YAKIMA RIVER

Ahtanum R. S.	21C11	3100	12/28	24	5.4	2.8	3.2
			1/25	24	4.6	1.3	6.1
Blewett Pass No. 2	20B02	4270	11/25	4	1.0	-	-
			12/23	27	6.8	0.0	6.5
			1/22	48	12.6	0.7	13.2
Bumping Lake Old	21C08	3450	12/31	30	7.1	3.4	6.5
			1/15	30	8.1	2.8	11.2
			1/29	44	12.1	4.0	13.3
Bumping Lake New	21C36	3400	12/15	40	5.9	4.7	6.4
			12/31	35	6.8	4.6	8.3
			1/15	36	10.0	5.1	14.2
			1/29	54	16.1	5.6	16.8

Average based on 1963-1977 Average

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 6

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD		
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year	Average [#]

YAKIMA RIVER (Cont.)

Cayuse Pass	21C06	5300	1/1	-	33.0*	14.3	34.5
			2/2	-	54.4*	15.8	59.5
Colockum Pass	20B09	5370	1/27	45	14.2	2.6	11.8
Cooke Creek	20B10	4123	1/27	20	5.1	0.5	5.3
Corral Pass	21B13	6000	2/3	102	36.9	9.0	17.2
Green Lake	21C10	6000	1/25	100	36.7	11.3	19.5
Grouse Camp	20B11	5385	1/26	53	15.3	5.5	12.3
High Creek	20B12	2930	1/26	27	4.9	1.7	5.5
Joe Lake +	21B46a	4624	2/1	Not Measured		8.4	41.8
Lake Cle Elum	21B14M	2200	12/3	7.2	1.8	-	0.9
			12/11	9.8	2.4	3.0	2.3
			12/29	30	6.6	2.2	3.9
			1/14	24	7.4	1.0	7.7
			1/27	36	11.8	0.9	8.5
Lemah Creek +	21B47a	3327	2/3	118	40.9	12.0	31.0
Manashtash	20C01	3935	1/28	21	4.6	1.4	4.3
Morse Lake	21C17	5400	2/1	Not Measured		16.0	38.9
Nanum	20B13	3875	1/26	25	5.1	2.5	7.4
Olallie Meadows	21B02	3625	2/3	113	42.9	3.2	34.9
Satus Pass	20D01	4030	1/28	40	11.8	1.4	8.9
Stampede Pass SP	21B10	3860	11/30	20	3.5	3.1	6.9
			12/14	42	11.0	5.2	13.8
			12/28	78	17.5	5.9	17.4
			2/3	114	40.2	6.7	31.5
Trail Creek	20B14	3360	1/27	15	4.2	0.4	2.9
Tunnel Avenue	21B08	2450	12/2	9.6	1.9	-	2.9
			12/11	18	5.4	4.2	6.9
			12/29	46	11.5	3.1	8.4
			1/12	42	13.2	2.0	15.0
			1/27	62	20.0	2.2	17.8
Van Epps Pass +	20B26a	5925	2/3	137	47.5	18.3	39.5
Walters Flat	20B15	3360	1/26	24	5.8	3.1	6.5
Waptus Lake +	21B49a	3024	2/3	124	43.0	7.4	32.3
White Pass (E. Side)	21C28	4500	12/14	33	8.4	4.6	7.6
			12/30	48	10.2	2.6	10.5
			1/15	52	15.6	1.2	14.4
			1/28	75	23.4	3.0	18.4

AHTANUM CREEK

Ahtanum R. S.	21C11	3100	12/28	24	5.4	2.8	3.2
			1/25	24	4.6	1.3	6.1
Green Lake	21C10	6000	1/25	100	36.7	11.3	19.5

Average based on 1963-1977 Average

+ Snow water equivalent estimated from aerial stadia observation

* Pillow reading

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 7

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average [#]

LOWER COLUMBIA DRAINAGEASOTIN CREEK

Spruce Springs	17C04	5700	1/25	66	20.2	5.1	18.2
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MILL CREEK

Homestead	17C01	4030	1/26	44	10.5	0.5	7.2
Martin Springs	17C02	4400	1/26	55	12.7	1.1	10.3
High Ridge	18D19	4150	2/1	95	29.6	7.5	17.7

KLICKITAT RIVER

Status Pass	20D01	4030	1/28	40	11.8	1.4	8.9
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COWLITZ RIVER

Cayuse Pass	21C06	5300	1/1	-	33.0*	14.3	34.5
			2/2	-	54.4*	15.8	59.5
Sheep Canyon	22C10SP	4050	1/6	65	15.8	-	New
			2/1	-	35.3	SNOTEL	
Strawberry Landing	22C08SP	3280	1/6	104	35.5	-	New
			2/1	-	51.3	SNOTEL	
White Pass (E. Side)	21C28	4500	12/14	33	8.4	4.6	7.6
			12/30	48	10.2	2.6	10.5
			1/15	52	15.6	1.2	14.4
			1/28	75	23.4	3.0	18.4

LEWIS RIVER

June Lake	22C09SP	3200	1/6	66	18.9	-	New
			2/1	-	31.7	SNOTEL	
Lone Pine Shelter	21C26	3800	1/6	73	19.2	-	New
			2/1	-	35.9	SNOTEL	
Plains of Abraham	22C01SP	4400	1/6	147	58.5	-	New
			2/1	SNOTEL DOWN			
Sheep Canyon	22C10SP	4050	1/6	65	15.8	-	New
			2/1	-	35.3	SNOTEL	
Spencer Meadow	21C20a	3400	1/6	66	17.6	-	New
			2/1	SNOTEL DOWN			
Surprise Lakes	21C13A	4250	1/6	105	32.4	-	New
			2/1	-	48.4	SNOTEL	

Average based on 1963-1977 Average

* Pillow reading

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 8

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average ^{+/-} #
NAME	Number	Elevation					

P U G E T S O U N D D R A I N A G EWHITE RIVER

Cayuse Pass	21C06	5300	1/1	-	33.0*	14.3	34.5
			2/2	-	54.4*	15.8	59.5
Corral Pass	21B13	6000	2/3	102	36.9	9.0	17.2
Morse Lake	21C17	5400	2/1	Not Measured		16.0	38.9

GREEN RIVER

Airstrip	21B24	1800	1/4	24	4.3	-	1.8
			1/31	12	4.6	0.0	5.6
Charley Creek	21B25	1200	12/30	8.2	1.3	-	1.5
			1/31	0	0.0	0.0	1.3
Cougar Mountain	21B42SP	3200	2/3	71	24.0	2.4	17.3
Grass Mtn. No. 2	21B27	2900	1/4	38	8.1	-	5.8
			1/31	36	12.7	2.1	15.2
Grass Mtn. No. 3	21B28	2100	1/1	Not Measured		-	2.2
			1/31	18	6.3	0.6	5.2
Lester Creek	21B29	3100	1/4	55	11/7	-	8.5
			1/31	60	18.0	3.3	17.5
Lynn Lake	21B50	4000	1/4	56	15.1	-	8.5
			1/31	64	25.4	3.1	18.2
Sawmill Ridge	21B31	4700	1/4	69	15.8	-	13.7
			1/31	84	28.8	6.3	27.5
Stampede Pass SP	21B10	3860	11/30	20	3.5	3.1	6.9
			12/14	42	11.0	5.2	13.8
			12/28	78	17.5	5.9	17.4
			2/3	114	40.2	6.7	31.5
Twin Camp	21B30	4100	1/1	Not Measured		-	10.6
			1/31	76	26.0	2.7	18.4

SNOQUALMIE RIVER

Olallie Meadows	21B02	3625	2/3	113	42.9	3.2	34.9
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SKYKOMISH RIVER

Stevens Pass	21B01	4070	11/30	34	5.3	2.2	8.5
			12/14	63	16.2	8.8	14.6
			12/29	84	22.9	6.1	21.9
			1/28	119	38.5	7.0	37.3
Stevens Pass Sand Shed	21B45	4070	11/30	24	3.7	0.5	8.2
			12/14	50	12.8	5.6	13.5
			12/29	66	18.6	2.2	15.3
			1/28	94	30.4	2.8	27.1

Average based on 1963-1977 Average

* Pillow reading

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 9

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST RECORD		
	NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)
				Last Year	Average	#

SKAGIT RIVER

Beaver Creek Trail	21A04	2200	1/27	46	13.4	0.8	12.2
Beaver Pass	21A01	3680	1/28	84	23.6	3.7	24.4
Brown Top Ridge +	21A28a	6000	1/27	147	46.5	26.6	48.1
Cloudy Pass +	20A22a	6500	2/1	Not Measured		20.4	30.0
Devils Park	20A04	5900	1/27	114	32.6	18.4	34.0
Freezeout Creek Trail	20A01	3500	1/28	50	11.7	0.5	11.3
Freezeout Meadows New	20A38	5000	1/28	86	23.0	9.0	28.2
Granite Creek	21A29A	3500	1/27	69	13.9	3.9	16.3
Harts Pass	20A05A	6500	1/29	110	30.0	18.8	34.2
Klesilkwa	3D03A-Can	3700	2/4	61	14.7	0.1	9.3*
Lightning Lake	3D02-Can	4000		Late Report		2.6	5.8*
Lyman Lake	20A23A	5900	2/2	156	49.9	21.3	39.8
Meadow Cabins	20A08	1900	1/28	24	7.1	0.0	6.9
New Hozomeen Lake	21A30	2800	1/28	41	9.7	0.8	10.5
New Tashme	3D01A-Can	2500	2/1	41	11.2	0.7	8.2*
Rainy Pass	20A09	4780	1/27	108	29.8	15.0	30.9
Thunder Basin	20A07	4200	1/28	61	8.0	1.0	17.0

BAKER RIVER

Dock Butte +	21A11A	3800	12/29	82	29.0	4.0	27.8
Easy Pass +	21A07A	5200	12/29	66	23.0	18.0	30.9
Jasper Pass +	21A06A	5400	12/29	112	39.0	24.0	43.0
Marten Lake	21A09A	3600	12/29	76	27.0	8.0	34.8
Mt. Blum +	21A18a	5800	12/29	53	19.0	14.0	30.4
Panorama New	21A26	4300		Not Measured		-	48.7
Rocky Creek	21A12A	2100	12/29	56	20.0	0.0	13.0
Schreibers Meadow	21A10A	3400	12/29	70	25.0	4.0	24.8
S. F. Thunder Creek +	21A14A	2200	12/29	22	8.0	0.0	5.4
Watson Lakes	21A08A	4500	12/29	65	23.0	4.0	27.5
				Late Report		8.0	44.4

NOOKSACK RIVER

Glacier Creek	21A23	3700		Not Measured		0.0	8.5
Panorama New	21A26	4300		Not Measured		-	48.7

Average based on 1963-1977 Average

* Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO FEBRUARY 1, 1982 - APPENDIX 10

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
NAME	Number	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average ⁺ #

O L Y M P I C P E N I N S U L A D R A I N A G EDUNGENESS RIVER

Deer Park	23B04	5200	1/29	61	18.6	0.8	15.2
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MORSE CREEK

Cox Valley	23B14	4500	1/31	106	32.4	2.3	29.1
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ELWHA RIVER

Hurricane	23B03	4500	1/27	59	15.2	0.7	16.4
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Average based on 1963-1977 Average

PRECIPITATION STORAGE GAGES

Amount of precipitation in inches that has accumulated since the previous measurement.

BIG BOULDER CREEK		BUNCHGRASS MDW		CEDAR FALLS 5SE		CEDAR FALLS 8SE	
10/1/80	Recharge	10/1/80	Recharge	7/31/80	Recharge	7/29/80	Recharge
11/1/80	1.8	11/1/80	3.1	9/3/80	3.62	9/3/80	4.05
12/1/80	11.0	12/1/80	6.1	10/3/80	3.41	10/3/80	4.04
1/1/81	15.4	1/1/81	8.3	11/3/80	1.49	11/3/80	1.92
2/1/81	2.3	Inoperable		1/6/81	22.15	12/1/80	13.21
3/1/81	11.3	6/3/81		2/2/81	2.99	1/6/81	14.05
4/1/81	1.8	7/1/81	10.9	3/3/81	8.52	2/2/81	2.13
5/1/81	5.8	8/1/81	6.0	4/2/81	4.47	3/2/81	12.57
6/1/81	2.6	9/1/81	0.3	5/1/81	7.45	4/2/81	4.43
7/1/81	3.4	10/1/81	2.3	6/2/81	5.00	5/4/81	10.86
8/1/81	0.6	11/1/81	4.7	7/2/81	8.52	6/2/81	3.19
9/2/81	1.0	12/1/81	5.3	7/27/81	1.49	7/1/81	7.24
10/1/81	2.0	1/2/82	6.3	9/1/81	0.64	7/27/81	1.49
11/1/81	4.4	1/31/82	0	10/2/81	8.51	9/1/81	1.28
12/1/81	6.0	CARNATION 15E		11/2/81	1.70	10/1/81	4.04
		8/4/80	Recharge	12/1/81	4.26	11/2/81	7.25
BLEWETT PASS		9/6/80	7.88	CEDAR FALLS 7SE		12/1/81	5.53
8/8/81		10/2/80	5.54	7/30/80	Recharge	CEDAR FALLS 10SE	
9/1/81	1.0	11/7/80	10.22	9/2/80	11.72	7/30/80	Recharge
10/1/81	2.0	12/2/80	15.98	10/1/80	3.41	9/2/80	6.18
11/1/81	3.0	1/6/81	20.23	11/3/80	3.83	10/3/80	4.26
12/1/81	3.4	2/3/81	2.77	12/1/80	15.12	11/3/80	4.47
1/1/82	7.8	3/3/81	20.45	1/6/81	15.98	1/6/81	34.08
2/1/82	9.5	4/2/81	6.82	2/2/81	3.41	2/2/81	3.84
BUMPING RIDGE		5/5/81	17.25	3/2/81	14.91	3/2/81	18.53
10/1/80	Recharge	6/3/81	5.32	4/1/81	5.53	4/2/81	7.03
11/1/80	0.5	7/2/81	12.56	5/4/81	13.00	5/4/81	15.76
12/1/80	12.7	7/30/81	3.62	6/4/81	4.68	6/4/81	6.39
1/1/81	11.4	9/6/81	1.70	7/1/81	8.95	7/1/81	11.08
2/1/81	0.4	10/6/81	13.00	7/30/81	1.92	7/28/81	2.55
3/1/81	7.8	11/3/81	7.66	9/1/81	1.50	9/1/81	2.98
4/1/81	3.3	12/1/81	10.65	10/1/81	5.53	10/1/81	5.32
5/1/81	4.0	CEDAR FALLS 4SE		11/2/81	8.74	11/2/81	8.74
6/1/81	0.2	7/28/80	Recharge	12/1/81	7.45	12/1/81	8.73
7/2/81	4.8	9/3/80	4.68	CEDAR FALLS 7SSE		CONSULTANT CREEK	
8/1/81	0.4	10/3/80	6.60	7/30/80	Recharge	8/4/30	Recharge
9/1/81	0.2	11/3/80	3.19	9/30/80	5.75	9/6/80	8.56
11/1/81	9.6	12/1/80	15.76	10/3/80	4.47	10/2/80	6.30
12/1/81	2.1	1/6/81	17.04	11/3/80	3.20	11/7/80	8.77
1/1/82	8.0	2/2/81	4.26	12/1/80	14.69	1/6/81	33.30
1/31/82	5.7	3/2/81	14.48	1/6/81	18.75	2/3/81	4.72
		4/2/81	7.03	2/2/81	3.62	3/3/81	17.32
		5/4/81	14.91	3/2/81	15.76	5/5/81	26.10
		6/5/81	6.39	4/2/81	6.39	6/3/81	2.70
		7/1/81	10.44	5/4/81	14.48	7/2/81	17.10
		7/29/81	2.56	6/5/81	6.18	7/30/81	4.72
		9/1/81	1.70	7/1/81	9.16	9/6/81	2.48
		10/1/81	5.54	7/28/81	2.77	10/6/81	12.60
		11/2/81	9.58	9/1/81	2.13	11/3/81	6.74
		12/1/81	8.73	10/1/81	5.11	12/1/81	9.46
				11/3/81	9.37		
				12/1/81	8.52		

CORRAL PASS		FROZEN MOUNTAIN		LESTER 5NNE		LESTER 8NNW	
10/1/80	Recharge	8/5/80	Recharge	7/28/80	Recharge	7/31/80	Recharge
11/1/80	22.3	9/6/80	10.80	9/2/80	6.60	9/3/80	4.68
12/1/80	6.4	10/2/80	6.52	10/1/80	3.41	10/3/80	4.26
1/1/81	6.9	11/7/80	11.26	11/4/80	4.26	11/4/80	4.05
2/1/81	1.7	Out of Service		1/7/81	28.76	1/7/81	30.67
3/1/81	6.5	7/31/81	Recharge	3/3/81	18.74	2/3/81	2.98
4/1/81	2.9	9/6/81	2.48	5/1/81	18.10	3/3/81	15.34
Inoperable		10/6/81	13.94	6/2/81	6.17	4/2/81	4.26
10/1/81	Recharge	11/3/81	9.00	7/2/81	10.65	5/1/81	10.01
11/1/81	2.3	12/1/81	11.93	7/29/81	1.07	6/5/81	5.54
12/1/81	7.3	GREEN LAKE		9/2/81	3.40	7/2/81	6.82
1/1/82	11.8	No data prior to		10/2/81	3.62	8/4/81	3.62
2/1/82	14.1	10/1/81	Recharge	11/3/81	4.90	9/2/81	2.56
COUGAR MOUNTAIN		12/1/81	6.4	LESTER 7NNW		10/2/81	5.32
No data prior to		1/1/82	12.5	7/31/80	Recharge	11/3/81	5.54
10/1/81	Recharge	1/8/82	0.8	9/3/80	4.90	12/2/81	10.22
11/1/81	8.5.	GROUSE CAMP		10/3/80	3.41	LESTER 10NNW	
12/1/81	7.0	No data prior to		11/4/80	4.69	7/28/80	Recharge
1/1/82	16.6	10/1/81	Recharge	1/7/81	31.74	9/3/80	4.90
2/1/82	22.9	11/11/81	3.6	2/3/81	2.98	10/3/80	5.12
DRY CREEK		11/25/81	4.0	3/3/81	16.82	11/3/80	3.62
8/5/80	Recharge	Inoperable		4/2/81	4.48	12/1/80	15.55
9/6/80	10.35	HARTS PASS		5/1/81	10.65	1/7/81	17.69
10/2/80	5.85	10/1/80	Recharge	6/5/81	5.32	2/2/81	2.76
11/7/80	8.78	3/26/81	71.2	7/2/81	7.88	3/3/81	16.61
12/2/80	15.76	4/1/81	7.5	8/4/81	1.28	4/2/81	5.11
2/3/81	22.50	5/1/81	3.2	9/2/81	2.34	5/1/81	12.14
4/2/81	27.90	6/1/81	3.9	10/5/81	6.18	6/2/81	4.69
5/5/81	19.12	7/1/81	2.9	11/3/81	5.11	7/2/81	10.65
6/3/81	6.75	8/1/81	1.6	12/2/81	11.08	7/29/81	1.06
7/2/81	11.92	9/1/81	0.9	LESTER 8N		9/1/81	2.56
7/31/81	3.82	10/1/81	6.3	7/31/80	Recharge	10/5/81	6.81
9/6/81	1.58	11/1/81	3.3	9/3/80	5.54	11/2/81	5.75
10/6/81	13.50	12/1/81	5.6	10/3/80	5.32	12/2/81	10.23
11/3/81	7.65	1/2/82	8.3	11/4/80	3.62	LESTER 11NW	
12/1/81	9.90	2/1/82	10.7	1/7/81	31.52	7/29/80	Recharge
FISH LAKE		JUNE LAKE		2/3/81	3.41	9/3/80	4.48
10/1/80	Recharge	10/1/80	Recharge	3/3/81	15.76	10/3/80	4.26
4/1/81	47.1	12/13/80	76.8	4/2/81	4.47	11/3/80	2.13
5/1/81	4.5	1/1/81	4.0	5/5/81	12.78	12/1/80	14.06
6/1/81	2.2	2/1/81	5.1	6/2/81	4.47	1/7/81	15.54
7/1/81	3.2	3/1/81	29.3	7/2/81	8.10	2/2/81	3.40
8/1/81	1.6	5/8/81	38.4	8/4/81	2.55	3/2/81	14.27
9/1/81	0.6	6/1/81	3.4	9/2/81	2.56	4/2/81	3.84
10/1/81	3.7	7/1/81	16.2	10/5/81	5.32	5/1/81	10.86
11/1/81	5.7	8/1/81	0.8	11/3/81	5.12	6/2/81	4.69
12/1/81	5.8	9/1/81	0	7/1/81		7/29/81	1.71
1/1/82	9.4	10/1/81	9.0	9/2/81		9/2/81	2.77
2/1/82	11.0	11/1/81	23.5	10/2/81		10/2/81	4.48
		12/1/81	24.7	11/3/81		11/3/81	5.53
		1/6/82	39.2	12/2/81		12/2/81	9.16
		2/1/82	31.1				

LONE PINE	MT. INDEX	PARK CREEK RIDGE	PORT ANGELES 11S
No data prior to	8/5/80	Recharge	9/1/80
10/1/81 Recharge	9/6/80	10.57	Recharge 9/1/81 47.74
11/1/81 13.5	10/2/80	6.98	
12/1/81 14.4	11/7/80	10.58	
1/1/82 15.2	1/6/81	40.50	POTATO HILL
2/1/82 8.9	2/3/81	4.05	10/1/80 Recharge
	3/3/81	22.28	3/15/81 75.5
MIDDLE FORK TAYLOR	5/5/81	28.36	5/7/81 7.1
8/1/80 Recharge	6/3/81	7.20	10/1/81 Recharge
9/2/80 5.75	7/2/81	13.94	11/1/81 5.4
10/3/80 4.90	7/31/81	4.28	12/1/81 9.4
11/3/80 6.18	9/6/81	2.93	1/1/82 14.9
12/1/80 12.36	10/6/81	12.14	1/27/82 13.2
1/6/81 17.68	11/3/81	8.56	
2/2/81 4.04			RAINY PASS
3/2/81 13.85	NORTH FORK TAYLOR	1/1/82 13.5	10/1/80 Recharge
4/1/81 5.11	8/1/80	Recharge 1/30/82 13.7	11/1/80 0.5
5/4/81 11.50	9/2/80	4.47	11/30/80 11.7
6/3/81 6.61	10/3/80	4.26	3/25/81 67.1
7/1/81 11.50	11/3/80	4.26	
8/5/81 2.34	12/1/80	12.14	PIGTAIL PEAK
9/1/81 1.07	1/6/81	14.91	4/1/81 1.0
10/1/81 6.82	2/2/81	2.98	5/1/81 5.3
11/3/81 10.22	3/2/81	10.87	2/13/81 130.2
12/1/81 3.62	4/1/81	4.26	7/1/81 3.2
	5/4/81	9.16	3/1/81 9.3
MIRROR LAKE	6/3/81	6.60	7/1/81 4.8
10/1/81 Recharge	7/1/81	9.58	8/1/81 0.9
11/1/81 5.4	8/5/81	2.35	9/1/81 2.0
12/1/81 6.6	9/1/81	1.28	10/1/81 1.0
1/6/82 10.0	10/1/81	4.69	11/1/81 4.7
1/16/82 0.8	11/3/81	8.52	12/1/81 5.7
	12/1/81	8.73	
MONTE CRISTO		PLAINS OF ABRAHAM	REGAN HIGH
10/31/80 Recharge	OLALLIE MEADOWS	10/1/80 Recharge	10/4/80 Recharge
11/4/81 138.15	10/1/81	Recharge 12/1/80 40.3	12/18/80 10.56
	11/1/81	3.5	
MORSE LAKE	12/1/81	11.3	1/29/81 5.92
10/1/80 Recharge	1/2/82	20.0	3/2/81 5.60
11/7/80 2.2	1/21/82	7.1	3/27/81 1.0
12/1/80 10.2			4/13/81 5.0
12/22/80 10.5	PARADISE	3/1/81 23.1	5/26/81 0.5
2/11/81 13.3	10/1/80	Recharge 4/1/81 6.8	7/27/81 5.48
3/1/81 11.4	11/2/80	5.6	5/1/81 11.4
4/1/81 3.7	12/1/80	21.0	6/1/81 3.5
5/1/81 8.7	1/1/81	25.3	7/1/81 8.8
Leak	2/10/81	0.9	8/1/81 1.0
10/1/81 Recharge	3/1/81	17.4	RUSTY CREEK
11/1/81 9.5	4/19/81	15.8	9/25/80 Recharge
12/1/81 12.0	5/2/81	6.7	10/27/80 0.3
1/1/82 7.2	6/1/81	5.3	11/25/80 1.6
2/1/82 11.3	7/1/81	7.8	12/23/80 2.5
	8/1/81	0.5	1/28/81 2.7
	9/1/81	0	2/25/81 3.8
	10/1/81	28.6	3/27/81 0.8
	11/1/81	0	4/28/81 0.6
	12/1/81	11.4	10/1/81 Recharge
	1/1/82	21.5	1/27/82 13.70
	2/1/82	6.7	

SALMON MEADOWS		SPRUCE SPRINGS		SWAUK PASS		TROUGH	(Cont'd)
9/25/80	2.38	10/1/80	Recharge	9/30/80	Recharge	6/1/81	2.1
10/27/80	0	10/1/81	39.80	12/17/80	6.75	7/2/81	1.0
11/25/80	1.62	STAMPEDE PASS		12/30/80	2.82	8/1/81	0.5
12/23/80	3.25	10/1/81	Recharge	1/27/81	1.68	9/1/81	.0.6
1/28/81	2.75	11/1/81	5.5	3/2/81	4.79	10/1/81	3.2
2/26/81	4.25	12/1/81	7.7	3/27/81	1.69	11/1/81	3.9
3/27/81	1.00	Inoperable		4/13/81	1.13	12/4/81	4.8
4/28/81	1.50			4/28/81	0.14	1/1/82	4.5
10/1/81	Recharge			5/26/81	2.39	1/30/82	2.8
1/27/82	17.13	STEVENS PASS		7/27/81	1.98		
		10/1/80	Recharge	8/27/81	2.07	UPPER WHEELER	
SHEEP CANYON		11/1/80	1.2			10/1/80	Recharge
10/1/80	Recharge	12/1/80	8.2	TAYLOR CREEK		3/26/81	25.2
12/11/80	25.0	1/1/81	9.1	8/1/80	Recharge	4/1/81	0
1/1/81	10.8	2/1/81	1.3	9/2/80	3.62	5/1/81	1.5
2/4/81	3.8	3/1/81	6.8	10/3/80	3.84	6/1/81	2.7
3/1/81	20.2	4/2/81	1.5	11/3/80	3.20	7/1/81	1.4
4/1/81	10.2	5/2/81	4.3	12/1/80	11.50	8/1/81	3.5
5/6/81	13.8	6/3/81	1.8	1/6/81	11.50	10/1/81	Recharge
6/1/81	5.2	Inoperable		2/2/81	2.56	11/1/81	4.3
8/1/81	7.4	10/1/81	Recharge	3/2/81	8.95	12/1/81	6.4
9/1/81	1.1	12/1/81	5.4	4/1/81	4.47	1/1/82	5.8
10/1/81	4.5	STRAWBERRY LANDING		5/4/81	8.31	2/1/82	5.1
11/1/81	19.4			6/3/81	5.96	WHITE PASS	
12/1/81	15.2	10/1/80	Recharge	7/1/81	7.96		
1/6/82	6.6	12/12/80	12.6	8/5/81	2.14	10/1/80	Recharge
2/1/82	38.3	12/26/80	19.6	9/1/81	1.07	11/21/80	2.5
		3/6/81	25.8	10/1/81	4.90	12/20/80	27.3
SNOHOMISH 8W		4/1/81	6.6	11/3/81	7.02	1/1/81	8.5
8/6/80	Recharge	5/4/81	11.2	12/1/81	5.54	2/1/81	2.1
9/6/80	10.22	6/5/81	5.6			3/1/81	7.3
10/2/80	8.52	7/1/81	11.5	TOUCHET #2		4/1/81	1.2
11/7/80	12.99	8/1/81	1.7	10/1/80	Recharge	5/1/81	3.6
Road Blocked		9/4/81	0.5	11/1/80	2.7	6/1/81	2.7
6/4/81	126.10	10/1/81	6.9	12/1/80	6.4	7/1/81	3.2
7/2/81	15.97	12/4/81	28.4	1/20/81	10.8	9/2/81	0
8/3/81	3.84	1/1/82	15.1	2/1/81	1.3	10/1/81	1.3
10/6/81	18.31	2/1/82	13.8	3/3/81	8.2	11/1/81	4.2
				4/1/81	5.9	12/1/81	5.1
SPENCER MEADOW		SURPRISE LAKES		5/1/81	6.4	1/1/82	7.5
10/1/80	Recharge	10/1/80	Recharge	6/1/81	2.8	1/31/82	11.8
3/12/81	44.9	12/1/80	17.4	7/1/81	7.1		
4/1/81	7.6	3/12/81	23.6	8/1/81	1.1	YELLOW CREEK	
5/1/81	8.8	4/1/81	3.7	9/1/81	1.3	8/4/80	Recharge
6/1/81	4.5	5/8/81	9.8	10/1/81	0.3	9/6/80	6.98
7/4/81	8.7	6/1/81	4.3	11/1/81	4.4	10/2/80	4.50
8/1/81	0.4	7/1/81	8.9	12/1/81	7.2	11/7/80	7.42
9/1/81	0.3	8/1/81	5.4	1/1/82	12.4	12/2/80	10.12
10/1/81	43.8	9/1/81	0.9	1/31/82	14.3	1/6/81	12.60
11/1/81	10.0	10/1/81	5.0			2/3/81	2.93
12/1/81	15.0	11/1/81	9.4	TROUGH		3/3/81	12.60
1/1/82	20.0	12/1/81	14.1	10/1/80	Recharge	4/2/81	5.40
2/1/82	20.3	1/1/82	22.1	11/1/80	1.3	5/5/81	13.05
		2/1/82	20.4	12/1/80	3.9	6/3/81	6.75
				1/1/81	6.3	7/2/81	9.00
				2/1/81	2.9	7/30/81	4.05
				3/1/81	3.9	9/6/81	1.58
				4/1/81	1.2	10/6/81	10.35
				5/1/81	0.8	11/3/81	5.18
						12/1/81	7.66

Agencies Assisting with Snow Surveys

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Washington State Department of Natural Resources

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NOAA, National Weather Service
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*Other organizations and individuals furnish valuable information for
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